

WA-II-1178

Potomac Mills (Shepherdstown Cement Mill)

Architectural Survey File

This is the architectural survey file for this MIHP record. The survey file is organized reverse-chronological (that is, with the latest material on top). It contains all MIHP inventory forms, National Register nomination forms, determinations of eligibility (DOE) forms, and accompanying documentation such as photographs and maps.

Users should be aware that additional undigitized material about this property may be found in on-site architectural reports, copies of HABS/HAER or other documentation, drawings, and the “vertical files” at the MHT Library in Crownsville. The vertical files may include newspaper clippings, field notes, draft versions of forms and architectural reports, photographs, maps, and drawings. Researchers who need a thorough understanding of this property should plan to visit the MHT Library as part of their research project; look at the MHT web site (mht.maryland.gov) for details about how to make an appointment.

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Last Updated: 03-25-2016

**United States Department of the Interior
National Park Service****National Register of Historic Places
Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a).

1. Name of Property

historic name Potomac Mills

other names Shepherdstown Cement Mill; Maryland Inventory of Historic Properties (MIHP) #WA-II-1178

2. Location

street & number River Road and Trough Road ☐ not for publication

city or town Shepherdstown ☒ vicinity

West Virginia; WV; Jefferson; 037;
state Maryland code MD county Washington code 043 zip code 25443

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ☐ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☐ nationally ☐ statewide ☐ locally. (☐ See continuation sheet for additional comments).

Signature of certifying official/Title Date

State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments).

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that this property is:

- ☐ entered in the National Register.
☐ See continuation sheet.
- ☐ determined eligible for the National Register.
☐ See continuation sheet.
- ☐ Determined not eligible for the National Register.
- ☐ removed from the National Register.
- ☐ other (explain): _____

Signature of the Keeper

Date of Action

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5. Classification

Ownership of Property
(Check as many boxes as apply)

- ☒ private
☒ public-local
☒ public-State
☐ public-Federal

Category of Property
(Check only one box)

- ☐ building(s)
☒ District
☐ Site
☐ Structure
☐ Object

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
1	0	sites
5	0	structures
0	0	objects
6	0	Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing)

N/A

number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

INDUSTRY/PROCESSING/EXTRACTION/manufactur
ing facility

INDUSTRY/PROCESSING/EXTRACTION/waterworks

Current Functions

(Enter categories from instructions)

VACANT/NOT IN USE

VACANT/NOT IN USE

7. Description

Architectural Classification

(Enter categories from instructions)

MID-19TH CENTURY/Other

Materials

(Enter categories from instructions)

foundation Limestone

walls Brick

roof

other

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets)

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Description Summary:

The Potomac Mills complex is situated on the south bank of the upper Potomac River in Jefferson County, West Virginia approximately one mile below Shepherdstown. The 18-acre property is situated on the river flood plain and the adjoining limestone hills. It is heavily wooded and is bisected by River Road leading east to west toward Shepherdstown and Trough Road leading north to south from the Packhorse Ford through a gap in the ridge toward Engle-Molers Road (the old road to Harpers Ferry). The property is bounded on the north by the Potomac River, where the remnant of the Potomac Mills dam can be seen. The south boundary runs along the ridge crest of the limestone hills and through several ravines created by drainage runs. The jagged cliffs of several abandoned quarries cut into the wooded hills and loom above River Road as it passes along the river bank, bisecting the mill complex property. Near the center of the narrow, wedge-shaped property sits the stone ruins of the Potomac Mills, the roofless brick "office building" or warehouse/dwelling, and the still-standing battery of six stone limekilns attached to the original small test kiln. Standing alone, the oldest stone limekiln sits perched on the hillside within a ravine nearby.

General Description:

Setting: (Photo #1)

The peaceful wooded setting of the Potomac Mills complex along the south bank of the seemingly quiet Potomac River belies its long history of industrial activity, and a record of raging flood waters. The upper Potomac River at Shepherdstown is approximately 700 feet wide and appears to flow gently, though the central channel has a notoriously swift undercurrent. Here, the south bank of the river has a very narrow flood plain, bounded by limestone hills that rise approximately one hundred feet to the south of the river bank. Deciduous woods of primarily poplar, maple, and oak cover the river bank and the hills. One deeply cut limestone quarry opens into the hillside near the west end of the property (Photo #6). The back of the quarry stretches approximately 200 feet into an adjoining property. A smaller quarry fronts directly onto River Road, an asphalt-paved county route, as it passes eastward toward its intersection with the north-south running Trough Road (Photo #5). Trough Road, also paved with asphalt, rises up from its intersection with River Road through a gap or ravine formed by a creek draining from the surrounding hills. The "drainage creek" cuts across the east end of the property under River Road through culvert of two metal pipes and continues through a relatively deep ravine to the river's edge.

The Potomac Mills complex consists of the mill building ruin, the roofless brick "office building" warehouse/dwelling, the Battery of Kilns with Test Kiln, the Large Kiln, a stone wall remnant of the head race, and the remnant dam structure in the Potomac River (in Maryland).

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The quarries complete the industrial complex as an integral feature of the production process. The two roads, Trough Road and River Road, and the Potomac River add to the setting of the Potomac Mills property. The roads historically provided ready access to the mill complex, while the Potomac River above the mill dam provided boating access across the river to deliver products to the C&O Canal transportation network.

Mill Ruin (1 contributing site), built 1826, cement mill addition 1828-29, rebuilt ca. 1870:

The ruin of the Potomac Mills mill building consists of the stone foundation/lower story walls of the large main building and smaller east addition (Photos #7-14; Figure 1). The building was initially constructed in 1826 as a grain mill and the cement mill addition was constructed in 1828-29. The building was burned in 1861 and reconstructed on the original stone foundations after 1867. Historically the building was four stories including the stone lower story and brick three stories above with a hipped roof and clerestory (Figures 2 and 3). The addition was two brick stories over the stone lower story with a gable roof. None of the brick masonry remains intact today and no wood features (joists, floors, window frames, doors, rafters, etc.) remain. Stone segmental arches are located on the interior wall where the raceway passed through the building. The ruin is overgrown with mature trees and underbrush.

Brick "Office Building" Warehouse/Dwelling (1 contributing structure), built 1829:

The brick structure is located on the south side of River Road approximately 150 feet east of the mill ruin (Photo #17). The brick warehouse was constructed in 1829 by then-owners Boteler and Reynolds to store cement for use in the construction of the C&O Canal. Locally this building is called the "Office Building," however newspaper advertisements from 1846 and 1865 describe a dwelling house associated with the mill, but no office building. It is likely this building was a warehouse converted to a dwelling house.

The brick walls of this three story building are still largely intact though the roof is gone and the third story walls (probably mostly later additions) have begun to crumble. None of the wood features remain intact. The lower story has three bays with a central entrance. The brick is common bond, 5 rows of stretchers to one row of headers. All four walls show diamond patterned vents in the brickwork. Most of the vent openings were later infilled (Photo #18 and 19), indicating the building's possible earlier use as a warehouse and later conversion to a dwelling. Interior walls of the lower two stories are plastered and whitewashed. It appears the third story was added by raising the front and back roof line, altering the gable end roof to a hipped roof (Photo #19; Figure 3). There is a brick interior chimney rising on the west gable end. There is an inscription in the plaster on the west interior wall "Boteler & Reynolds 1829" (Photo #20).

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Battery of Kilns with Test Kiln (1 contributing structure), built 1828-1830:

The Battery of Kilns is located on the river bank below the north edge of River Road approximately 350 feet west of the mill ruin (Photo #22). The kiln bank was constructed in three phases: the small stone test kiln on the west end (1828); the western bank of three stone vertical kilns (1829); and a slightly later bank of three stone vertical kilns (1830) on the east end.¹ The test kiln (Photo #21) sits near the top of the bank on the south west corner of the Battery of Kilns. It is a small box-kiln constructed of stone with a brick-lined opening with a flat stone lintel. The six vertical kilns are all constructed of stone (Photo #22). All have brick arched draw pits. The western bank of three kilns has keystones (Photo #23) and eastern bank of three does not (Photo #24). Some of the face stones on the western bank of three kilns have fallen out. The tops of the kiln bank are nearly level with the River Road surface. All are filled in with debris and appear only as depressions in the ground (Photo #25). See Figure 4 for kiln sections.

Large Kiln (1 contributing structure), built 1828-29:

The Large Kiln (Photos #26-29), in operation by April 1829, is sited on the east side of a hill within a ravine, south/southwest of the mill ruin on the south side of River Road. It is a large, heavily built stone vertical kiln with a slightly pyramidal shape and a brick-arched draw pit on the east face. The interior kiln throat is stone and brick lined.

Riverside Stone Wall (head race wall) (1 contributing structure), built 1826:

The Riverside Stone Wall (Photo #15) is located along the south edge of the river. It is approximately 289 feet long and runs from the south end of the dam remnant to about 25 feet west of the mill ruin. It is likely a remnant wall of the head race. Part of the wall shows cement repairs.

Dam Remnant (1 contributing structure), built 1826:

During periods of low water, the partial remains of the Potomac Mills dam can be seen as a distinct ripple across the river (Photo #16). The remains are the stone foundation of the dam; none of the historic log cribbing remains intact (Figure 2).

¹ Thomas F. Hahn and Emory L. Kemp, *Cement Mills Along the Potomac River*, Institute for the History of Technology & Industrial Archaeology (WVU), Monograph Series, Vol. 2, No. 1, 1994, p. 42. Hahn and Kemp conclude from the documentary and physical evidence that the battery of six kilns extant in the Potomac Mills complex are the ones constructed in 1829 and 1830. There is lingering confusion however, because a Civil War soldier's account, written after the 1862 Battle of Shepherdstown (Battle of the Cement Mill) describes only three kilns. Since these are recollections from the heat of battle, it seems prudent to be cautious in dating the kilns based on those recollections.

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Resource count:

1 contributing site
Mill Ruin

5 contributing structures
Brick "Office Building" Warehouse/Dwelling
Battery of Kilns w/ Test Kiln
Large Kiln
Riverside Stone Wall
Dam Remnant

The quarries are considered contributing elements to the overall significance of the Potomac Mills complex but are not individually counted.

The two county roads which pass through the Potomac Mills property are considered part of the setting of the mill complex but are not counted as contributing or non-contributing as they continue far beyond the nominated boundary.

Evaluation of Integrity:

The Potomac Mills complex stands partly in ruins after more than 100 years of abandonment and repeated flooding by the Potomac River. Still, the mill ruin, brick office/warehouse, stone kilns, dam and headrace remnants, and the looming cliffs of the limestone quarries clearly evoke the commercial activity that hummed beside the Potomac River. The complex as a whole retains substantial integrity of location, setting, design, materials, workmanship, feeling and association.

The Potomac Mills complex, abandoned since 1901, has been in various stages of deterioration for over a century. The mill, a part of which was a grain and flour mill and expanded to a cement mill, is in ruins but the remaining walls provide clear evidence of the building's appearance when standing, showing the demarcation of interior spaces, windows, dimensions and the ingress and egress route for the water that turned its wheel. In fact, the mill was in ruins during the 1862 Battle of Shepherdstown, having been set on fire by Union forces in 1861. The raceway walls and the mill dam are discernible, although the upper log portion of the dam is gone. The base of the dam is still present causing a rapid that runs in a straight line across the river. The stone limekilns are largely intact as are the quarry walls that proved to be a death trap for retreating Union troops trying to reach the safety of Maryland at the close of the Battle of Shepherdstown. The brick "office" warehouse/dwelling building, still standing three stories

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high despite its loss of roof and floors, retains all four walls as well as window and door openings and a fireplace with an inscription by its 1829 builders. Its transformation from warehouse to dwelling shows clearly in the masonry.

The Potomac Mills complex is the best preserved of the ten known nineteenth century cement mills along the Potomac River and the only one identified as both a grain and cement mill.² While having changed over time due to natural and man-made alterations, nevertheless the property clearly communicates its history as an industrial cement and grain milling complex.

Though the Potomac Mills complex is now a standing ruin, it retains integrity as an industrial archeological site. All of the original components retain integrity of association as an industrial complex and possess the potential to provide information about the processes of hydraulic cement production as it evolved through the nineteenth century. Repeated flooding has laid multiple layers of silt over original ground levels, sealing any potential archeological material for future study. The site has never been archeologically investigated.

² Hahn and Kemp, pp. 73-84.

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8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- ☒ **A** Property is associated with events that have made a significant contribution to the broad pattern of our history.
- ☐ **B** Property associated with the lives of persons significant in our past.
- ☐ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☒ **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply)

Property is:

- ☐ **A** owned by a religious institution or used for religious purposes.
- ☐ **B** removed from its original location.
- ☐ **C** a birthplace or grave.
- ☐ **D** a cemetery.
- ☐ **E** a reconstructed building, object, or structure.
- ☐ **F** a commemorative property.
- ☐ **G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets)

Area of Significance

(Enter categories from instructions)

Industry

Archeology/Historic/Industry

Period of Significance

1826 – 1901

Significant Dates

1826; 1828; 1829; 1830; 1861; ca. 1870

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

Euro-American

Architect/Builder

N/A

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets)

Previous documentation on files (NPS):

- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
- ☐ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey # _____
- ☒ recorded by Historic American Engineering Record # WV-82

Primary location of additional data:

- ☒ State Historic Preservation Office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☐ Other

Name of repository:

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Summary Statement of Significance:

The Potomac Mills complex is regionally significant under National Register Criteria A and D (historic) in the area of Industry for its important role as an industrial cement mill, appended in 1829 to Henry Boteler and George Reynolds' already active grain mill, producing hydraulic cement used in the construction of the Chesapeake & Ohio Canal, regional railroads, and for public building projects in Washington, D.C. through the late nineteenth century. Now a standing ruin, the industrial complex has significant potential to yield archeological information about the hydraulic cement production process during the nineteenth century. The Potomac Mills complex gains additional significance on a local level under Criterion A as a merchant grain mill established in 1826, which purchased and processed locally-grown grains for resale in the port city markets of Georgetown and Baltimore. As both a grain and cement processing facility, the Potomac Mills was an unusual combination.

The Potomac Mills complex is one of ten cement mills located in Maryland and West Virginia associated with the Chesapeake & Ohio Canal, and appears to be the best preserved of the ten. Of the nine other plants identified in Thomas Hahn and Emory Kemp's documentation, *Cement Mills Along the Potomac River*, only two were located in West Virginia – Hooks Mill in Morgan County, the site of which has not been found, and Cedar Cliff in Mineral County, of which only the kilns remain visible. In Maryland, the Carrollton Cement Mill (Frederick Co.), Antietam or Potomac Cement Mill (Washington Co.), Round Top Mill (Washington Co.), and Pinto Cement Mill (Allegany Co.) remain identified only by the kilns still standing; the Cumberland Cement Mill (Allegany Co.) is identified only by its quarry; the Leopards Cement Mill (Allegany Co.) has no extant remains; and the Tuscarora Cement Mill (Frederick Co.) location remains unknown.³ Thus the Potomac Mills is distinguished as a rare or unique survivor with at least remnants of the entire milling complex.

The processing of grain in the Shenandoah Valley, particularly wheat and corn, in water-powered mills helped develop not only a thriving local and regional industry, but also aided in the transportation of agricultural products to the eastern port city markets by reducing their bulk. Still, wagon transport over bad roads and the Blue Ridge Mountains made transportation improvements in the region of primary importance, culminating with the 1828-1850 construction of the Chesapeake & Ohio (C&O) Canal along the northeast bank of the Potomac River. The Potomac Mills, established in 1826 by Henry Boteler and George Reynolds, was initially a merchant grain mill, but added a cement mill and processing complex by 1829 primarily to meet the C&O Canal construction need for hydraulic cement. Potomac Mills cement was also used in Baltimore & Ohio (B&O) Railroad construction projects as well as many public buildings in Washington, D.C. throughout the nineteenth century. Production all but stopped during the American Civil War due to the Potomac Mills' location adjacent to a Potomac River ford,

³ Hahn and Kemp, pp. 73-84.

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historically known as Packhorse Ford. The river crossing, known as Boteler's or Blackford's Ford by 1861, crossed the boundary between the United States and the Confederacy and placed the Potomac Mills complex in a dangerous position. In 1861 Union troops burned the buildings and in 1862, the charred mill stood on the front line of the September 19th-20th Battle of Shepherdstown, also known as the Battle of the Cement Mill, on the heels of the Battle of Antietam or Sharpsburg. The Potomac Mills buildings were rebuilt following the war, processing both grain and cement for local and regional markets. While the region's grain milling industry died out in the late nineteenth century, the Potomac Mills cement production continued to thrive, producing building materials for construction projects in Washington, D.C. In 1889, the C&O Canal was devastated by flood, remaining closed until 1896. Though the flood closed the Potomac Mills only for a week, the canal's extended closure curtailed cement production through the 1890s. Facing increasing competition from Portland cement production elsewhere, the Potomac Mills closed permanently in 1901 and fell into ruin.

The period of significance for the Potomac Mills is 1826 through 1901, covering the construction of the Potomac Mills beginning in 1826 and its years of industrial activity through the 1901 closing of the mill complex.

Archeological Significance and Research Questions

The Potomac Mills complex is significant for its potential to answer important research questions about the industrial processes of hydraulic cement production, how that might have changed over time, and how those processes shaped the surrounding landscape.⁴

The Potomac Mills complex has never been archeologically investigated. However, repeated flooding by the Potomac River, the cause of the ruinous condition of the mill complex, has sealed historic archeological horizons under layers of river silt. The standing ruins provide a physical "road map" over which to trace potential archeological research questions including but not limited to the following:

1. How was natural cement production organized and how is that organization reflected in the Potomac Mills site?
2. How did that organization change over time?
3. Did techniques of quarrying limestone change over time as evidenced by the several quarries?
4. How are changes in the power source reflected in the Potomac Mills site?

⁴ As part of the larger Battle of Shepherdstown Civil War battlefield site, the Potomac Mills site also has significant potential to yield information pertaining directly to that 1862 battle. This potential should be noted for future reference in any archeological investigation.

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5. In what way did transportation systems within and around the mill complex change over time relating to transport of mill products to local and regional markets?

Historic Context:

Virginia began its attractive settlement policy in the 1720s, offering cheap land to settlers who would improve the land for agricultural production. It was an attempt by colonial governor William Gooch to reduce the Lord Fairfax claim to 5 million acres known as the Northern Neck of Virginia. Migrants followed "The Great Waggon Road to Philadelphia," leading southwestward from Pennsylvania through Maryland, crossing the Potomac River at the Packhorse Ford and into Virginia. The Packhorse Ford crossing of the upper Potomac River – then called Cohongoroota, an Indian name referring to the abundance of geese along the upper Potomac – led settlers into the lower Shenandoah Valley as early as the 1720s. Settlers began recording their land surveys there in 1732.⁵

By 1772, the population of the lower valley's Frederick County, carved from Orange County in 1738, had grown to the extent that a new county called Berkeley was created. It was a melting pot of Quakers, Pennsylvania Germans, and the sons of English plantation owners from the overpopulated eastern lands of Maryland and Virginia. The settlers of German descent brought with them a heritage of grain agriculture. Those that ventured westward from the tidewater region – where tobacco was king – into the mountain and valley region quickly adjusted to wheat as the primary cash crop, while still producing smaller amounts of tobacco.⁶

Wheat and corn, and to a lesser extent rye and oats, were processed in water-powered mills into flour and meal, or distilled into whiskey. By the 1790s, the region was active with grist and flour mills along nearly every waterway and stills located on nearly every farm. Berkeley County land sale advertisements often included references such as, "a good mill seat," or "particularly adapted to raising heavy grain."⁷ Frederick County, Maryland, located east of Berkeley County, Virginia, was representative of the region with as many as 80 grist mills and 300-400 stills reported on the 1798 tax record.⁸ Jefferson County, Virginia, a much smaller county carved from Berkeley County in 1801, numbered 30 mills along its waterways according

⁵ Robert Brooke Survey Book, Thornton Perry Collection, microfilm copy, Ruth Scarborough Library, Shepherd University, Shepherdstown, WV. This part of Virginia's Orange Co. became part of Frederick Co. in 1738, then part of Berkeley Co. in 1772, and then Jefferson Co. in 1801; West Virginia was established in 1863.

⁶ "The Diaries of George Washington," Donald Jackson, ed., (The Papers of George Washington, Charlottesville: University Press of Virginia, 1976), transcription online at: <http://memory.loc.gov>, accessed July 2012.

⁷ *The Potomac Guardian, and Berkeley Advertiser*, 1791-1799, microfilm collection, Martinsburg & Berkeley Public Library, Martinsburg, WV.

⁸ T. J. C. Williams, *History of Frederick County, Maryland*, (Baltimore: Regional Publishing Co., 1967, reprint of the original 1910 edition), p. 267.

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to the map drawn by Charles Varlé in 1809. These industries show the dominance of grain production through the high number of mills and stills and the degree to which the area had developed marketable finished goods. By 1810, Pennsylvania, Virginia, and Maryland led the nation in flour production.⁹

The processed grain commodities were transported to markets in Alexandria, Virginia, Annapolis and Baltimore in Maryland, and to Philadelphia, Pennsylvania. However transportation from the Shenandoah Valley and the grain growing regions of west-central Maryland and Pennsylvania was a problem. Rough wagon roads crossing several mountains, and fords and ferries across rivers and streams remained the standard. Water transport – the traditional form of transportation in the tidewater counties of both Maryland and Virginia – was seen as essential for economic advancement on the western frontier. George Washington, whose western Virginia land would certainly have benefited from transportation improvements on the Potomac River, sought to improve the river for commercial shipping.¹⁰ The Revolutionary War interrupted the plans for improvement, but in 1785 the Patowmack Navigation Company was officially incorporated, with George Washington at the helm. The company cleared channels from Cumberland to the fall line at Great Falls, but it was not until 1802 that construction of the skirting canals around Great Falls and Little Falls was completed. In the end the unpredictable nature of the upper Potomac River made boating of goods to the tidewater ports unreliable. By 1827 the Patowmack Navigation Company had failed.¹¹

The first decades of the nineteenth century saw road improvements by turnpike companies, spurred by construction of the National Road west from Cumberland, Maryland. However, the Blue Ridge Mountains still stood between the farms of western Maryland and Virginia and their markets to the east. Dreams of water transport persisted and in 1828 the first shovel of dirt was turned on the construction of a still-water canal to run from the Ohio River to the tidal Potomac at Georgetown, Maryland. The Chesapeake & Ohio (C&O) Canal was planned to follow the northeast bank of the Potomac River through Maryland. Construction was slow, requiring the excavation of the canal prism as well as construction of stone-lined locks, culverts, aqueducts and dams. Hydraulic or natural cement, designed to harden in a water environment, was essential to C&O Canal construction. Thus, hydraulic cement mills catering to canal needs were established at locations along the route, including “Tuscarora, Maryland, above the Monocacy Aqueduct; at Shepherdstown, (West) Virginia; at Hooks Mill, (West) Virginia, across the river from Hancock, Maryland; at Round Top, Maryland; at Leopards Mill, Maryland, below Dam No.

⁹ Susan Winter Frye, *Mill Settlement Patterns Along the Antietam Creek Drainage, Washington County, Maryland*, bound thesis, College of William and Mary, 1984, p. 45.

¹⁰ Grace L. Nute, ed., “Washington and the Potomac Manuscripts of the Minnesota Historical Society, [1754] 1769-1796,” reprinted from the *American Historical Review*, Vol. XXVIII, no. 3, April 1923, p. 500.

¹¹ Paula S. Reed & Associates, “Great Falls Park Virginia, Historic Resource Study,” (Great Falls Park, GWMP, NPS, 2008), pp. 31-70.

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6; and at Cumberland, Maryland.”¹² The Shepherdstown (Potomac Mills), Round Top, and Cumberland cement mills were the largest, “providing the C&O Canal and the Potomac Valley with natural cement for many decades.”¹³

At the same time and on the same day in 1828, the Baltimore & Ohio (B&O) Railroad began construction in direct competition with the C&O Canal. Following approximately the same route as the canal, the railroad was forced at the narrow southern tip of Washington County in Maryland to cross the Potomac River into Virginia (now West Virginia) at Harpers Ferry. The railroad reached Cumberland, Maryland in 1842 eight years before the canal arrived in 1850, and continued westward, ultimately taking much of the transportation business away from the canal. The C&O Canal never ventured further than its western terminus at Cumberland. The route of the B&O Railroad through Virginia’s Jefferson County became a significant factor during the American Civil War as this major supply line for the Union army passed through Confederate territory.

As the United States dissolved into civil war in 1861, the Potomac River became the dividing line between Confederate Virginia and Union Maryland. Maryland was a border state, a slave state still within the Union and its allegiance was wavering, particularly through the early years of the war. With only a few miles of Maryland between Virginia and Pennsylvania, where the easy terrain and abundant produce of the Cumberland Valley seemed vulnerable, Confederate troops invaded this Northern territory several times throughout the Civil War. The food and supply gathering mission undertaken by the Confederates as part of the Gettysburg Campaign is well documented in the words of the Southern soldiers themselves describing the lushness of the farms.¹⁴ In July of 1864 Confederate General Jubal Early led another invasion into Northern territory, sending General McCausland into Franklin County to occupy Chambersburg. Early’s plan was to demand a ransom of \$100,000 in gold or the town would be burned. It was a threat on which his men followed through, leaving much of the town in smoldering ruins.¹⁵

Maryland was now firmly within the Union, but the Jefferson and Berkeley County sections of the B&O Railroad, a company controlled by Baltimore native John W. Garrett, lay in enemy territory. A regular target of Confederate sabotage, protection of the railroad kept Union troops at Harpers Ferry and Martinsburg through much of the war. Ultimately, the railroad helped determine the inclusion of both Berkeley and Jefferson Counties in West Virginia – a Union state carved from Virginia in 1863 – despite their largely Confederate-leaning populations. Protection of the C&O Canal, also a vital supply line for the Union army, located along the northeast bank of the boundary river ensured the near-constant occupation of the Maryland side of the Potomac River by various contingents of Union troops.

¹² Hahn and Kemp, p. 30.

¹³ Hahn and Kemp, p. 30.

¹⁴ Spencer Glasgow Welch, *A Confederate Surgeon's Letters to His Wife*, (1911), p. 150.

¹⁵ Warner Beers & Co., *History of Franklin County, Pennsylvania*, (Unigraphic Inc., reproduction, 1975), p. 130.

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Throughout the 1860s and into the 1870s the railroads, once the savior of mid-Atlantic farmers, spread across the prime farming regions to the west. The promise of new agricultural land attracted many of the descendants of the industrious German farmers who had developed Virginia's Shenandoah Valley grain economy. Soon the railroads were transporting large amounts of grain from the west to the eastern markets, lowering grain prices. The farms of the Shenandoah Valley by 1880, still burdened by debts incurred from losses during the war as well as lower land values, faced unfamiliar competition from the new "bread basket" in the Midwest. The eventual demise of the local milling industry around the turn of the twentieth century and of the C&O Canal in 1924 left the region a quiet shadow of the bustling mid-nineteenth century era.¹⁶

Resource History

Growth of the Milling Industry in Virginia's Shenandoah Valley

Enthusiasm for the future of the frontier development in the lower Shenandoah Valley is evidenced by the establishment of mills and towns in the earliest decades of settlement. Thomas Shepherd, who was granted 222 acres just west of the Packhorse Ford and The Great Waggon Road, erected a grist mill and saw mill there before 1744 and by about 1755 had laid out a town with twenty lots for sale.¹⁷ In 1762, when his town was officially incorporated, Shepherd named it Mecklenburg (later called Shepherd's Town, now Shepherdstown) and recorded a plat with more than 100 lots.¹⁸

The Potomac River crossing was improved by a ferry by 1755, officially established by an Act of the Virginia General Assembly and operated by Thomas Swearingen with a landing just below Shepherd's new town.¹⁹ The ferry crossing marginalized the old ford but did not put it out of business. The 1809 Map of Berkeley and Jefferson Counties drawn by Charles Varlé showed both the "Ford" and the "Ferry" near "Shepherds Town." The map also illustrated a road running from Shepherds Town along the river bank (today's River Road) to an intersection with Hite's road (Trough Road) at the ford (Figure 6). Varlé's map shows the extent of development in the recently divided counties (Jefferson County was carved from Berkeley in 1801), with as many as 30 mills along its creeks and Potomac River frontage, including Shepherd's mills still in operation at the Shepherds Town location.

¹⁶ Paula S. Reed, *Tillers of the Soil: A History of Agriculture in Mid-Maryland*, (Frederick, MD: Catoclin Center for Regional Studies, 2011), p. 61.

¹⁷ Frederick Co., VA Order Book 1, page 104, microfilm copy, Handley Library, Winchester, VA. This 1744 record was for appointment of the overseers for a road between the Opeckon (Opequon) Creek and "Thomas Shepherd's Mill." Danske Dandridge, *Historic Shepherdstown*, 1910 (<http://books.google.com>), p. 37, citing a lease agreement.

¹⁸ Dandridge, p. 263.

¹⁹ Mabel and Ann Henshaw Gardiner, *Chronicles of Old Berkeley*, 1938, p.57.

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Despite transportation improvements by the Patowmack Navigation Company along the Potomac River leading to markets at Georgetown and Alexandria, and improvements to the roads leading from Swearingen's Ferry toward the Baltimore and Philadelphia markets, the early decades of the nineteenth century proved difficult for farmers. As the young United States engaged in an embargo and then a war with Great Britain, sales of agricultural commodities such as wheat were severely impacted. From the port of Baltimore, flour exports decreased by half from 1807 to 1808, from 500,000 to 250,000 barrels.²⁰ After the War of 1812, wheat farmers were challenged again, this time by insects, as Hessian flies attacked the grain crop. Some farmers responded by turning to other crops like clover, expanding acreage, or growing livestock. Crop yields also increased through the use of fertilizers. Many farms had small limekilns in which they burned the local limestone, producing lime for use as fertilizer.²¹

Thus by the second half of the 1820s the improved wheat crops encouraged Shepherdstown physician Henry Boteler and local businessman George Reynolds to embark on a merchant milling partnership. In an 1826 agreement recorded in the Jefferson County Circuit Court, Boteler and Reynolds stated their intention: "...the said Henry Boteler and George Reynolds are about to build a water Grist Mill on the Potomac River, near Shepherds Town..."²² Boteler owned the land along the river and agreed with Reynolds to hold in common "a lot of 30 or 40 acres of Land which shall be laid off along the margin of the river where the mill is to be built," beginning "on the Potomac River near a Spring thence with said Boteler's line up the fording road hollow..."²³ The tract included that part of the river frontage identified in a 1734 land survey for Isaac Garrison, which also noted "the Waggon Road Ford."²⁴ The now-ancient ford was still used by locals to avoid the cost of the nearby ferry crossing. Both the ford, by the mid-nineteenth century known as Boteler's Ford, and its adjoining roads (today's Trough Road and River Road) would provide ready access to Boteler and Reynold's mill.

George Reynolds was not new to milling. He and his father, George Reynolds, Sr. owned and operated the former Hoffman Mill several miles to the south since 1819. The Reynolds/Hoffman Mill (no longer extant) was a small mill, producing just 800 barrels of flour from 1819 to 1820.²⁵ By comparison, the merchant grist mill on the nearby Shenandoah River owned by William Little and William Craighill (Avon Mill, later Hopewell Mill, no longer

²⁰ Van Ness, "Economic Development," in Walsh and Fox, p. 176.

²¹ Paula S. Reed, *Tillers of the Soil: A History of Agriculture in Mid-Maryland*, (Frederick, MD: Catocin Center for Regional Studies, 2011), p. 34.

²² Jefferson Co. (JC) Deed Book (DB) 14, p. 351, Agreement dated July 25, 1826.

²³ JC DB 14, p. 351.

²⁴ Robert Brooke Survey Book, Thornton Perry Collection, microfilm copy, Ruth Scarborough Library, Shepherd University, Shepherdstown, WV.

²⁵ 1820 U.S. Population Census, Jefferson County, Virginia, microfilm copy, Ruth Scarborough Library, Shepherd University, Shepherdstown, WV. The census taker for Jefferson Co. included "A List of Mills in Jefferson County with the quantity of flour manufactured by each, from 1st August 1819 to 1st August 1820."

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extant) produced 10,000 barrels of flour over the same period. Boteler and Reynolds' new mill was a "large merchant (i.e. grist) mill," according to a letter written by Henry Boteler in 1828.²⁶ Merchant mill owners typically purchased the unprocessed grain from local farmers and, after processing, shipped the flour or meal in bulk to larger city markets. It is likely that Boteler and Reynolds were anticipating the construction of the C&O Canal along the river bank opposite the new mill and its connection to the Georgetown market.

The Chesapeake & Ohio Canal and Potomac Mills Hydraulic Cement

Discussions about constructing a still-water canal along the Potomac River began among producers, merchants, and legislators from Maryland and Virginia before 1820.²⁷ The advantages of canal transportation were already being demonstrated by the construction of New York's Erie Canal in 1817 and many in the Potomac region were anxious to gain that advantage. Isaac Briggs, the engineer hired by the Maryland legislature to investigate the feasibility of a canal along the Potomac wrote in a newspaper editorial in 1822:

In consequence of the long and narrow form of Maryland, this proposed improvement will bring almost to our very doors, the cheapest, safest, and most perfect of all possible modes of conveying our produce to market; and of bringing home its returns. It will...establish the predominance of, the agricultural interest.²⁸

Gathering the governmental and financial backing for such a large undertaking, however, would take several more years. The Virginia charter for the Chesapeake & Ohio Canal Company was confirmed by the Maryland legislature in January of 1825, followed by the U.S. Congress in March of the same year. Subscriptions of stock were opened to the public in 1827 and groundbreaking began on July 4, 1828.²⁹

Canal construction, beginning with the Erie Canal in New York, was the primary catalyst for the production of natural or hydraulic cement in the United States. Industrial historians, Thomas Hahn and Emory Kemp observed in their monograph *Cement Mills Along the Potomac River*: "It is clear from a study of the history of the natural cement industry that the canals of the United States depended on the manufacture of natural cement."³⁰ At its peak in 1899, there were 76 natural cement manufactories, most located in New York, Indiana, and Kentucky, while four were in Maryland and one (Potomac Mills) in West Virginia.³¹ Natural cement's salient property

²⁶ As cited in Hahn and Kemp, p. 32.

²⁷ Harlan D. Unrau, *Historic Resource Study: Chesapeake & Ohio Canal*, (Hagerstown, MD: US Dept. of Interior, NPS, C&O Canal National Historical Park, 2007), p. 49.

²⁸ As cited in Unrau, p. 51.

²⁹ Unrau, pp. 55-56.

³⁰ Hahn and Kemp, p. 17.

³¹ Hahn and Kemp, p. 17. These numbers are for the year 1899 only. Through the nineteenth century, beginning in 1828

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was its ability to harden and remain hard under water – a necessity for the construction of dams, locks, and bridges. Hahn and Kemp describe the manufacturing process:

Natural cement...is made from naturally occurring limestone with a suitable argillaceous component usually 13 percent to 35 percent, of which 10 percent to 22 percent is silica... The cement rock (argillaceous limestone) is calcined [oxidized by heating] at a slightly higher temperature than that used to produce quicklime...

The burned limestone is ground into a fine powder which, when combined with water, produces a hydraulic paste with the main cementitious materials being calcium silicates. This paste does not slake [chemically change to calcium hydroxide], will set under water, and is waterproof.³²

The kiln type used most commonly to burn (heat or calcine) the limestone was “usually a truncated pyramid with a cone shaped opening inside, which, in later days, was lined with firebrick,” and for convenience “often built in batteries against a hillside so that they could be more easily charged [filled] from the top.”³³ “Continuous vertical kilns” could be continually recharged with stone and coal, as described by Kenneth Reis in 1901:

In burning natural cement rock, the fire is first started in the bottom of the kiln, and on this are spread alternating layers of coal and rock. The coal is of pea or chestnut size commonly. As the burned stone is drawn from the bottom, fresh stone and fuel are added at the top...The yield of these kilns is large, being 50-120 barrels of cement per ton of coal.³⁴

The limestone rocks loaded from the top rested within the cone or kiln throat above the arched draw pit and heated to 1300 to 1500 degrees. The calcined rock was then transported to the mill to grind it to powder, using often nothing more than “ordinary grist mill buhr-stones” through much of the nineteenth century.³⁵ Thus the process required the appropriate limestone quarry, vertical kilns in which to burn (calcine) the limestone, and a mill to grind the powder.

In January of 1828, six months before canal construction began, Henry Boteler wrote a letter to the president of the C&O Canal Company, Charles Fenton Mercer, in which he identified what he believed to be proper limestone for natural cement production:

with the Potomac Mills cement mill, there were a total of three plants in West Virginia and seven in Maryland. See Hahn and Kemp, pp. 73-84.

³² Hahn and Kemp, pp. 8-9.

³³ Hahn and Kemp, p. 9.

³⁴ Kenneth Reis, “Lime and Cement Industries of New York,” Bulletin of the New York State Museum, Nov. 1901, as cited by Hahn and Kemp, p. 11.

³⁵ Hahn and Kemp, p. 12.

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This stone is found in great abundance on my premises, below this place [Shepherdstown]. It is found on the surface and under the ground to a considerable depth. The hill, which appears to be entirely of this stone, is 200 feet high, and nearly half a mile around its base.³⁶

The company sent John H. Cocke, Jr., who was already tasked with finding local supplies of building and cement limestone, to test the stone at Boteler and Reynolds' mill site. Cocke tested the stone in a small kiln in September 1828 and confirmed that it was good natural cement.³⁷ Immediately Boteler and Reynolds made a proposal to the canal company, "...that they could burn, grind, and deliver cement at the mill for 18.75 cents per bushel."³⁸ The proposal noted additional costs for delivering the powdered cement by river boat to Georgetown, Maryland where the construction of the canal had begun just two months earlier.

C&O Canal construction was slow due to a shortage of laborers, land disputes, lack of adequate funding, and an ongoing dispute with the Baltimore & Ohio Railroad over the narrow strip of right-of-way below Maryland Heights. While the railroad lost the right-of-way battle and was forced to cross the Potomac River into Virginia at Harpers Ferry (now West Virginia), still railroad construction greatly out-paced construction of the canal. Ironically, Boteler and Reynolds provided the C&O Canal Company with natural cement calcined in kilns fired with coal that was transported by the B&O Railroad.³⁹

Boteler and Reynolds' Potomac Mills grew with the natural cement business. The original stone and brick grist mill building had two sets of buhrs turned by water power drawn from the Potomac River by a stone and log crib dam. Beginning in 1829, the grist mill performed double duty during the harvest season, alternating between grinding grain and cement stone. New buhr-stones made specifically for grinding calcined limestone arrived later in 1829, along with a smaller cement mill addition to the original building. The first limekiln (Photo #s 26-29) was constructed on the hillside near the mill in late 1828 or early 1829 and was in operation by April 1829. An additional bank of three kilns was constructed below the river road closer to the mill in June-July 1829 and another three were added by April 1830. The battery of six kilns was, according to Boteler and Reynolds, capable of producing as much as 1,000 bushels of cement in a single day.⁴⁰

³⁶ As cited in Hahn and Kemp, p. 32.

³⁷ The small kiln attached to the west end of the kiln bank on the Potomac Mills site today (2012) is presumed to be the experimental kiln used by John H. Cocke, Jr.

³⁸ Hahn and Kemp, p. 33.

³⁹ Hahn and Kemp, p. 38.

⁴⁰ Hahn and Kemp, p. 39-43. Hahn and Kemp conclude from the documentary and physical evidence that the battery of six kilns extant in the Potomac Mills complex are the ones constructed in 1829 and 1830. There is lingering confusion however, because Civil War soldier's accounts, written after the 1862 Battle of Shepherdstown (Battle of the Cement Mill) describe only three kilns. Since these are recollections from the heat of battle, it seems prudent to be cautious in dating the kilns based on those recollections.

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The Potomac Mills complex ground wheat into flour, and ground lime for architectural plaster and fertilizer (also known as "plaster") as well as for natural (hydraulic) cement. Their contracts with the C&O Canal Company were likely their most significant income producer. In 1829 Boteler and Reynolds were authorized by the canal company to erect a warehouse to accommodate storage of the 2,000 bushels of lime ground per week in their mill for canal use.⁴¹ Their August 7, 1829 to May 15, 1830 contract was for 80,000 bushels at 19 cents per bushel; a second contract extended from January 28, 1830 to September 1, 1830 for 60,000 bushels. Additional contracts with the canal extended through 1837, after which cement was primarily supplied to the canal construction from the Round Top Mill at Hancock, Maryland.⁴²

By 1834, C&O Canal construction had reached Lock 38 opposite Shepherdstown. Nearly all of the traffic on the canal to this point was agricultural produce, with flour topping the list.⁴³ The Potomac Mills dam across the Potomac River, located just below Lock 38, allowed produce, fertilizer lime or plaster, bags of natural cement, and other products to be boated across the river from the landing at Shepherdstown:

The impoundment formed a slackwater pool that occasioned the construction of a river lock in 1833-1835 to provide access to the canal from the river. This made possible the tapping of an extensive Virginia trade, which was an important source of business for the canal. Barges were loaded on the Virginia (West Virginia) side, floated across the river, and entered the canal via the river lock.⁴⁴

The Potomac River ferry, still in operation under the ownership of John Blackford, also benefited from the slackwater. Blackford's journal from the year 1838 noted ferrying as much as "3 ton plaster in two trips" from "George Reynolds mill."⁴⁵ A thriving wharf community grew at the ferry landing below Shepherdstown. In 1836, George Reynolds entered into an eleven-year lease of the ½-acre "Ferry Lot" with owners John Blackford and the Swearingen heirs.⁴⁶ The terms required that Reynolds build a warehouse on the lot (no longer standing). Reynolds, in addition to the Potomac Mills business, owned and operated a canal packet boat called "The Henry

⁴¹ Unrau, p. 165, citing *Proceedings of the President and Board of Directors*, A, 276 and "Diary and Account Book, 1828-1829," W. Robert Leckie Papers, Duke University Library. The vents in the brick bonding of the brick "office" building on the Potomac Mills site and the 1829 inscription date are both indications that this building was likely this warehouse, later converted to a dwelling house (as described in later sale advertisements).

⁴² Unrau, p. 166.

⁴³ Unrau, pp. 437-440. Product-specific statistics were only available for the years 1831 (over 71,000 barrels of flour transported) and 1832 (over 91,000 barrels of flour transported). The years 1833 and 1834 showed overall toll revenue increases as the canal reached the Great Valley in Washington County, Maryland and by extension the lower Shenandoah Valley across the river.

⁴⁴ Unrau, p. 671.

⁴⁵ John Blackford, *Ferry Hill Plantation Journal... 4 January 1838-15 January 1839*, Fletcher M. Green, Thomas F. and Nathalie W. Hahn, eds., (Shepherdstown, WV, 1975), p. 40.

⁴⁶ JC DB 21, p. 75.

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Boteler.”⁴⁷ Shepherdstown merchant William Shortt also located his canal boating warehouse at the ferry landing. About 1849, Shortt replaced his wood building with a large stone warehouse (today commonly known as the Tobacco Warehouse).⁴⁸

In June of 1835, the partnership of Boteler and Reynolds was dissolved when Henry Boteler sold his interest in the mill complex and their jointly acquired tracts of land, a total of nearly 400 acres, to George Reynolds for \$25,932.⁴⁹ Though Reynolds fulfilled his mortgage obligation to Boteler for this purchase, by 1842 Reynolds was in debt to the tune of \$27,000. In his 1842 Deed of Trust to Henry Berry, George Reynolds mortgaged everything he owned as security: his home farm and mill, the Potomac Mills and ferry lot warehouse, 3,000 acres in Morgan County, 29 slaves, 30 horses, 20 mules, 40 cattle, several hundred sheep and hogs, nine wagons, three carts, a Threshing Machine, and his four canal boats.⁵⁰ In 1846, Reynolds defaulted on this mortgage and was forced by Chancery Court to sell all of his property, including the Potomac Mills.⁵¹ A newspaper advertisement for the July 1846 public sale of the mill property described the “Very Extensive and Valuable Milling Establishment known as the ‘Potomac Mills,’ with 10 or 12 Acres of Land adjacent thereto”:

The Mill-House is of Brick and very well built. It has Six Pair of Burrs, and commands the entire water-power of the Potomac River. Besides the Merchant Mill, there is a saw-mill, of the most approved construction, a Plaster Mill, and several large and well-constructed permanent Lime Kilns, situated immediately on the River and near the Mill, with every convenience for manufacturing the Hydraulic Cement upon the most extensive scale.

Upon the premises are a large and well built Smoke House, Blacksmith’s Shop, several Work Shops, with a convenient Dwelling-House.⁵²

The adjoining tracts of land were to be sold separately. Alexander R. Boteler, son of Dr. Henry Boteler, purchased the Potomac Mills complex for \$15,100 (Figure 7).⁵³ Boteler continued the Potomac Mills name and operations through the 1850s, advertising both cement and grain products in the local newspaper.⁵⁴

⁴⁷ Blackford, p. 40.

⁴⁸ *Shepherdstown Register*, 1849-1850, microfilm collection, Ruth Scarborough Library, Shepherd University, Shepherdstown, WV.

⁴⁹ JC DB 21, p. 8.

⁵⁰ JC DB 25, p. 387.

⁵¹ JC DB 20, p. 399, Deed of Trust from Boteler to Reynolds June 1835, released; JC DB 28, p. 241 Chancery sale deed.

⁵² *Martinsburg Gazette*, June 18, 1846, microfilm collection, Martinsburg Public Library, Martinsburg, WV.

⁵³ JC DB 28, p. 241.

⁵⁴ *Shepherdstown Register*, July 2, 1850 and November 26, 1853.

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Alexander R. Boteler was elected to Congress in 1859 as an Independent. Born in 1815 in the Shepherdstown area to the wealthy landowning and slave-owning Boteler family, he was opposed to the idea of dividing the Union. It was apparently an opinion shared by a majority of residents in Jefferson County.⁵⁵ But as the Union began to dissolve in 1861, following South Carolina's secession and attack on Fort Sumter, the Commonwealth of Virginia's strong sentiment toward states rights became evident. At the first special convention held in April 1861 initial votes went against secession; that changed to a vote in favor of Virginia seceding from the Union in May 1861.⁵⁶ Maryland, now sandwiched between Confederate Virginia and Union Pennsylvania, was a wavering border state still within the Union.

The Civil War on the Border between North and South

Virginia's secession from the Union drew the line of division along the banks of the Potomac River. The river served as a natural barrier between Union North and Confederate South. However, though most bridges were burned early in the war, the several river fords above Great Falls served both sides in their forays into enemy territory. By August 1861, various Union regiments guarded the river fords on the Maryland side. At that time the 13th Regiment Massachusetts Volunteers covered the "Shepherdstown Ford," the old Packhorse Ford by then also commonly known as Boteler's or Blackford's Ford.⁵⁷ Private James Ramsey, Co. E, of the 13th Regt., was stationed at the ford on the night of August 18th, 1861. In a letter home written later in October, Ramsey recalled the destruction of the Potomac Mills:

While we were at Sheppardstown [sic] we were in a dangerous position which we then did not realize, our camp was situated on a hill within rifle range of the rebels, on their side of the river they had thick foliage besides a four story factory which some of our company burnt, as a good place of protection against our firing they could pick off our guard without danger from our rifles.⁵⁸

Potomac Mills owner, Alexander Boteler, by then a Colonel in the Confederate army and a representative in the Confederate legislature, was specifically targeted when both his home and the Potomac Mills were burned during the same Union raid.⁵⁹

⁵⁵ Millard K. Bushong, *A History of Jefferson County West Virginia 1719-1940*, (Westminster, MD: Heritage Books, 2007), p. 279.

⁵⁶ Bushong, p. 100.

⁵⁷ Elliot Clark Pierce, "A Midnight Ride," as cited on "Head Quarters, 13th Regt. Rifles, Mass. Vol.," "Camp at Sharpsburg, Md.," <http://13thmass.org/1861/sharpsburg.html#mozTocId170991>, accessed July 27, 2012.

⁵⁸ As cited on "Head Quarters, 13th Regt. Rifles, Mass. Vol.," "Camp at Sharpsburg, Md.," <http://13thmass.org/1861/sharpsburg.html#mozTocId170991>, accessed July 27, 2012.

⁵⁹ Unrau, pp. 166-167.

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Throughout the first year of the Civil War, Maryland's commitment to the Union was fragile, with a divided legislature and even divided families with fathers, sons, and brothers joining the fight in one or the other opposing army. Still, the majority of Marylanders professed their loyalty to the Union, though perhaps sympathetic to the southern cause. And with the nation's capital city of Washington located within the state's borders, Federal forces aimed to keep the state within the Union. Confederate General Robert E. Lee's Maryland Campaign in the late summer of 1862 sought to test the waters of rebellion in Maryland, and perhaps ease the strain of near constant fighting in Virginia. By bringing the war into Northern territory, he hoped to force a negotiated peace through public pressure on Congress.⁶⁰

On September 4, 1862, Lee's Army of Northern Virginia crossed the Potomac River at White's Ford, entering Maryland in Montgomery County and turning north. At Frederick, General Lee hatched his plan in Special Order No. 191, to divide his army between Harpers Ferry, Boonsboro, and Hagerstown where they were to reunite and head north into Pennsylvania. A mislaid copy of the order was later found in the field by a Union soldier and delivered to Major General George B. McClellan, newly assigned commander of the Union Army of the Potomac. Knowing that Lee's army was dangerously divided, McClellan took chase catching up with the Confederate rear guard stationed near Boonsboro at South Mountain on the morning of September 14th. The small contingent of Confederates held the three South Mountain gaps throughout the day, blocking the Union army from passage until Harpers Ferry surrendered and the Confederate forces reunited. But instead of reuniting at Hagerstown as planned, they regrouped on the west bank of the Antietam Creek, occupying the rural Maryland town of Sharpsburg with their backs to the Potomac River. Lee's grossly outnumbered force of less than 65,000 men faced McClellan's approaching army of approximately 80,000 – though both armies were already reduced by casualties and stragglers – with only the Antietam Creek and the ripened cornfields and orchards of the Sharpsburg area farms between them.⁶¹

The battle that raged throughout the day on September 17th, 1862, called the Battle of Antietam in the North and the Battle of Sharpsburg in the South, left over 23,000 men killed, wounded or missing. The day ended with little ground actually lost by Lee's Confederates. But the overwhelming numbers of men still available to Union General McClellan left Lee little choice but to retreat back across the Potomac River on September 18th (Figure 8). The following day, September 19th, General McClellan sent a dispatch to Major General Henry W. Halleck in Washington, D.C.:

Pleasanton is driving the enemy across the river. Our victory was complete. The enemy is driven back into Virginia. Maryland and Pennsylvania are now safe.⁶²

⁶⁰ Paula S. Reed & Associates, Inc., "Cultural Resources Study, Monocacy National Battlefield," (NPS, 2004), p. 42.

⁶¹ Paula S. Reed & Associates, Inc., "Cultural Resources Study, Monocacy National Battlefield," (NPS, 2004), p. 43; Paula S. Reed & Associates, Inc., "Sharpsburg Historic District," National Register documentation, 2008, Section 8, p. 8.

⁶² As cited in Thomas A. McGrath, *Shepherdstown: Last Clash of the Antietam Campaign September 19-20, 1862*,

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McClellan's dispatch, though ultimately true, would prove to be premature.

The nearby Boteler's (Packhorse) Ford of the Potomac River served as a conduit, first bringing Major General Ambrose P. Hill's Confederate troops marching from Harpers Ferry to join the fight at Antietam (Sharpsburg), then for the Confederate retreat back to Virginia following the battle and the Union pursuit.⁶³ The final battle of the Maryland Campaign occurred on the Virginia side of the river crossing, around the burned-out ruins of the Potomac Mills, the quarry cliffs above, and along the old "Waggon Road" by then known locally as Trough Road. (Figure 9)

On the morning of September 19th, Union artillery located on the Maryland hillside overlooking the Potomac River began pounding the Virginia bank in preparation for the Union crossing. Confederate General Lee's instruction to his small force at the river was to "guard the fords" at least until night and then prepare the infantry "to join their respective divisions on the march to-morrow."⁶⁴ The intended march was to head toward the Valley Road (today's Route 11) at Martinsburg and to re-cross the Potomac at Williamsport, continuing on toward Pennsylvania. It seems neither Lee nor McClellan anticipated the battle about to unfold around Alexander Boteler's ruined mill.

Just at sundown on the evening of September 19th, as the Federal batteries renewed their pounding fire, a group of 50 volunteer sharpshooters supported by the 4th Michigan Volunteer Infantry waded into the river at Boteler's Ford. The shadows of the small Union force crossing the river under the dark of the evening appeared to the Confederate artillerymen on the bluff like "a million" men and their retreat began.⁶⁵ The abandoned Confederate artillery on the Virginia side was easily captured. On the morning of the 20th, lulled by the success of the night prior, the unsuspecting men of the Union's 1st Division, 1st Brigade, including the 118th Pennsylvania Volunteer Infantry "Corn Exchange Regiment," "splashed and paddled" across the ford to the Virginia side. They deployed up the Charlestown Road (Trough Road) and down the river road (today's River Road) by the mill ruin. Then they followed a path up the hill to the fields of the Osbourn farm on the bluffs.⁶⁶ There the forces of Major General Thomas J. "Stonewall" Jackson surprised the Union troops. Despite renewed and reportedly vicious shelling from the Maryland side, the Confederate line relentlessly advanced on the Union force formed above the quarry cliffs.⁶⁷ (Figure 5)

(Lynchburg, VA: Schroeder Publications, 2008), p. 59.

⁶³ Jay Luvaas & Harold W. Nelson, *Guide to the Battle of Antietam*, (Lawrence: University Press of Kansas, 1996), p. 237, Brig. Gen. Samuel McGowan, CSA, Commanding Gregg's Brigade, A.P. Hill's Division, Jackson's Corps, wrote in his report: "We made a forced march up the river, crossed the river at Boteler's Ford, a short distance below Shepherdstown, and arrived on the field of Sharpsburg in the afternoon...reaching the actual presence of the enemy at 3:40 p.m., which was not a moment too soon..."

⁶⁴ McGrath, p. 65.

⁶⁵ McGrath, p. 80.

⁶⁶ McGrath, pp. 101-112.

⁶⁷ McGrath, pp. 116-118.

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Union Major General Fitz John Porter arrived on the Maryland river bank to view the unfolding drama. Surprised by the extent of the reconnaissance-turned-battle, Porter recalled:

Seeing the small force of infantry on the opposite bank (two brigades of Sykes's and part of one of Morell's), and the impossibility of getting over and forming sufficient force in time to meet the attack, I ordered all to withdraw and take shelter within the canal.⁶⁸

Though the re-crossing began relatively orderly, as the columns collapsed into retreat they found themselves under fire from the Confederates behind them and from friendly fire in front. In the confusion, the green troops of the 118th Pa. Corn Exchange were at the rear and still in line of battle, not having been given the order to withdraw by their colonel.⁶⁹

Nearly alone on the cliff above Boteler's mill ruins, the Corn Exchange bravely stood their ground until they were completely overrun by Confederate troops. (Figure 10) Their wild retreat down the ravine path over which they had initially arrived proved to be a death trap as rebel guns fired on them from above. Others found themselves at the edge of the cliff, falling to their deaths. Sharpsburg resident Jacob Miller, a southern sympathizer, described what he saw as he watched the battle from his farm on the Maryland side of the river:

...at the cement quarry they ["the yankees"] made no halt but tumbled over into the pit. Some broke their arms some their legs some their necks and some knocked out their brains but nearly all that went over were killed they were piled on top of each other eight or ten feet high...⁷⁰

Those that did make it to the river alive faced the barrage of gun and artillery fire coming from above and from across the river. Private Joseph Meehan slid down the bluff, "and reaching the road at the bottom...ran a short distance till I came to three archways in the hill. Into the first of these I got for protection."⁷¹ Meehan was not alone in his limekiln refuge. Remarkably, a relatively large number of men reached the river's edge, only to face the river crossing:

From his position in the kilns, Joseph Meehan had a close-up view of the chaos near the dam: "From our retreat we witnessed a scene of great excitement. Men were trying to get across the river, the bullets dropping about them like hail. One or two

⁶⁸ Porter's official report, as cited in McGrath, p. 124.

⁶⁹ McGrath, p. 143. The order to withdraw given to Corn Exchange Colonel Charles Prevost was relayed to him through one of his Lieutenants from the adjunct of Colonel James Barnes, commander of the 1st Brigade at the time. Prevost, feeling that the relay of orders occurred improperly, refused to withdraw his regiment. After a second order was relayed from Barnes personally (not from his adjunct), and after Prevost was wounded, the regiment withdrew from its untenable position.

⁷⁰ December 7, 1862 letter from Jacob Miller to his daughter Amelia Hauser, "Jacob Miller Letters," transcribed by Jan Wetterer and Paul Chiles, Antietam National Battlefield, Sharpsburg, MD. Words are spelled as written by Jacob Miller.

⁷¹ As cited in McGrath, p. 157.

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were swimming, as being a safer plan. A breakwater ran across the river near us, and it contained many dead and wounded men."⁷²

Captain Frank Donaldson recalled: "I stood near the sluice way which intervened between the dam proper and the riverbank, seeing to the passage of the same by such of my company willing to venture across, and with aching heart witnessed the utter demoralization and rout of this fine body of men, who, beaten, dismayed, wild with fright, all order and discipline gone, were rushing headlong toward the dam, across which alone lay safety and escape."⁷³

The Battle of Shepherdstown, also known as the Battle of the Cement Mill, ended September 20th with 160 dead – 64 Confederate and 96 Union, of which 80 were from the 118th Pa. Corn Exchange Regiment.⁷⁴ Immediately following the bloody Battle of Antietam this number seemed small, though the scenes were horrific and the results of the battle were significant. General McClellan came away believing it nearly impossible to follow Lee into Virginia, instead keeping his army encamped around Sharpsburg and along the Potomac through October 1862. On November 8th, frustrated by the delay, President Lincoln replaced McClellan with Major General Ambrose E. Burnside as head of the Army of the Potomac.

In the end, General Lee found no sentiment for rebellion in Maryland and did not "anticipate any general rising of the people in our behalf."⁷⁵ By the end of September 1862 Lee found his army to be in such a poor condition as to prevent his plan to "threaten a passage into Maryland," noting in his letter to Confederacy President Jefferson Davis:

I would not hesitate to make it even with our diminished numbers, did the army exhibit its former temper and condition; but, as far as I am able to judge, the hazard would be great and a reverse disastrous. I am, therefore, led to pause.⁷⁶

The Confederate army did not cross again into Maryland until the summer of 1863, once again bringing the war to the North. Reaching as far as Gettysburg, Pennsylvania, their failure there proved to be the last large invasion from the South. A smaller crossing occurred in July of 1864 when Confederate Lieutenant General Jubal A. Early led a force of approximately 15,000 in an attack on Washington D.C. in an effort to draw Grant's Union troops away from Richmond. Early's plan was foiled when his force was delayed at the Monocacy River crossing near Frederick by 6,000 Federal troops under the command of General Lew Wallace.⁷⁷ Smaller incursions for supplies and ransom continued throughout the war, but the Confederate hope that

⁷² McGrath, p. 157.

⁷³ As cited in McGrath, p. 161.

⁷⁴ McGrath, Appendix A.

⁷⁵ Richard R. Duncan, "The Era of the Civil War," in Walsh and Fox, p. 357, quoting OR, series 1, XIX, part 2, pp. 590-592.

⁷⁶ McGrath, p. 184.

⁷⁷ Paula S. Reed & Assoc., "Monocacy National Battlefield," National Register of Historic Places documentation update,

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Maryland would join the cause died with the end of the Maryland Campaign on the south bank of the Potomac River by the ruins of the Potomac Mills.

Post-Civil War Reconstruction

Not surprisingly, Alexander Boteler's business collapsed with the destruction of the mill in 1861. In September 1865, the property was again for sale at auction:

On Saturday, the 7th of October, next, that very desirable Property upon the south bank of the Potomac, one mile below Shepherdstown, known as the

"Potomac Mills,"

including the Mill Lot of about **Fifteen Acres** and all its Valuable Appurtenances.

The Water Power

belonging to this Property is one of the most extensive in the State, comprising as it does the full force of the Potomac river by means of a dam some seven hundred feet in length, built against a ledge of rock, which extends at right angles across the bed of the River, constituting thereby an indestructible natural dam of itself and affording the best possible foundation for such a superstructure.

The

Hydraulic Cement Quarries

upon the premises are convenient to the kilns and capable of supplying an unlimited amount of that Mineral of the very best quality.

Although the buildings have nearly all been destroyed during the recent war – the Merchant Mill, Cement Factory, Saw Mill, &c., having been burnt by Massachusetts troops in the summer of 1861 – the walls of the principle part of them remain without material injury, being of the most substantial character, those for instance of the Merchant Mill being one hundred feet long by fifty wide, three stories high of brick, three feet thick at their base, and eighteen inches at top, resting upon a limestone foundation six feet thick, built upon arches sprung on solid rock.

By means of the Chesapeake and Ohio Canal and the Baltimore and Ohio Railroad every facility is afforded for transportation to and from this Property, which from its situation in the fertile Valley of the Shenandoah, is admirably located in every respect for the establishment of a Manufacturing village and is well worthy the attention of enterprising capitalists.⁷⁸

⁷⁸ *Shepherdstown Register*, September 2, 1865, microfilm collection, Ruth Scarborough Library, Shepherd University, Shepherdstown, WV.

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Following its sale to a group of trustees for \$35,000, the money was to be used to reinvest in the mill complex.⁷⁹ In 1867, the Potomac Mills Mining and Manufacturing Company was formed and rebuilt the mills ca. 1870. Cement production resumed by 1875, according to the editor of the *Shepherdstown Register*:

...the editor stated that a Major Hagan was running the mill to its "fullest capacity, and making an excellent quality of cement, all of which is shipped to Washington (presumably by canal) where there is a great demand for it. The Major puts things 'very likely'."⁸⁰

Major Harry Blunt, a Washington builder who also owned a Jefferson County horse farm, leased the Potomac Mills through the 1870s. In 1878, it was likely Blunt who purchased the complex under the name of new trustees, William Webb and L. E. Coyle.⁸¹

Operations at the plant through the rest of the nineteenth century followed the seasonal schedule of the C&O Canal, April through December, closing in the winter months. The canal closed due to ice but the cement plant's primary clients, builders in Washington, D.C., also suspended operations in the winter months.⁸² In 1879, the *Shepherdstown Register* gave a detailed account of the Potomac Cement Mills operations:

The Potomac Cement Mills below town, are now running regularly, regularly [sic], though not to their full capacity. The daily average is at about seventy-five barrels. Some twenty or twenty-five hands are kept in constant employment under the management of Mr. J.E. Lucas, the efficient Superintendent. There has recently been put up in the mills a set of new and improved buhr for grinding the cement, which are said to be superior to the old style of buhr. We noticed the other day, about one thousand barrels of cement ready for market; about seven hundred of that number has been shipped on the boat of Mr. J.W. Osbourn via the Chesapeake and Ohio Canal to Washington. The cement is now considered the best in the country and the demand for it is rapidly increasing. The five [sic] kilns are constantly burning, and the business of the mill has necessitated the building of a new packing machine, which is now being made by that expert old millwright, Mr. Davy Karns, of Williamsport, Md.⁸³

An 1883 description of the works published in *A Practical Treatise of Limes, Hydraulic Cements, and Mortars*, detailed the quarrying, burning, and milling process at Potomac Mills, called "The Shepherdstown Works":

⁷⁹ JC DB I, p. 244 (March 6, 1866) and 412 (September 26, 1866).

⁸⁰ Hahn and Kemp, p. 54.

⁸¹ JC DB F, p. 498.

⁸² Hahn and Kemp, pp. 54-56.

⁸³ As cited in Hahn and Kemp, p. 56.

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The Shepherdstown Works comprise two run of four and a half French buhrstones and the necessary crackers, driven by water power, and three perpetual kilns...Cumberland coal is used for burning. The stone is derived from deposits which crop out in several places on the banks of the Potomac, near the mill. Though considerably tortuous and irregular, their general position is nearly vertical. The stone is quarried from the top of the hill, is then passed into the kilns, situated on the slope below, and subsequently to flat-boats in the mill-race. These are then floated into the mill, and the burnt stone is discharged through the hatchways up to the crackers. The deposit is in two principal layers, one of which furnished a quick, and the other a slow setting cement. The two are mixed together in nearly equal proportions, a combination which is believed to yield a better cement than either of the beds would if used alone.⁸⁴

Hahn and Kemp observed that while this is the first description of the mill to include a mention of "crackers," they were always a part of the process. A cracker literally cracked the burned limestone, "to break the stone down into pieces small enough to be put into the grinding stones."⁸⁵

Like all Potomac River valley occupants, the Potomac Mills owners and workers had to deal repeatedly with both flood conditions and drought. In 1884, the mill was closed in August due to low water in the river. Low water affected not only the plant's ability to produce power to turn the mill stones, but also to transport the burned stone to the mill by flat boat down the head race, and to deliver the cement across the river to the canal. The C&O Canal, which also drew its water from the Potomac River, was negatively impacted by low water with reduced traffic. Major Blunt responded to the drought by installing a steam engine to power a "turbine wheel" at the mill.⁸⁶

More destructive to both canal and mills, floods or "freshets" were common along the Potomac during the nineteenth century as woodland along the watershed was cleared for building material, heating fuel, charcoal production, and farming. The June 1, 1889 Potomac River flood was the worst ever recorded at the time, with a crest of 44 1/3 feet at Williamsport and 34 feet at Harpers Ferry. The water level at Harpers Ferry was 21 feet above the canal towpath. It was disastrous for the C&O Canal with numerous locks, gates, warehouses, and lockhouses washed away, and hundreds of feet of canal breeches. The necessary repairs closed the canal for three years, forcing it into receivership.⁸⁷ The Potomac Mills main building was flooded to the second floor, according to a newspaper report, and the railway just recently installed to transport the

⁸⁴ As cited in Hahn and Kemp, pp. 58-59.

⁸⁵ Hahn and Kemp, p. 59.

⁸⁶ Hahn and Kemp, p. 60.

⁸⁷ Unrau, pp. 311-315.

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limestone from the kilns to the mill was "swept away."⁸⁸ The cement mill was back on line by the following week but the canal did not fully reopen until 1892, and then without the river lock opposite the Shepherdstown landing. It was not until 1896 that cement could be delivered by boat, a much less expensive proposition than hauling it to the railroad depot. But by then the mill dam had fallen into disrepair which severely limited boating across the river.

The Potomac Mills produced cement sporadically through the remaining years of the 1890s. In addition to problems created by the river and transportation issues, competing production of Portland cement in the U.S., "an artificial mixture of lime, silica, and alumina" first produced in 1872 in Pennsylvania, had grown from 335,000 barrels in 1890 to 8,482,000 in 1900, and to over 92,000,000 by 1913.⁸⁹ In the summer of 1900, Major Blunt prepared to reopen the mill, rebuilding the log crib dam and repairing machinery, reportedly with plans to eventually replace the dam with a concrete construction. With everything repaired by the close of the season, the plant was ready to begin production in the spring. On January 12, 1901, Major Blunt died, and though his son Harry W. Blunt, Jr. took up the reins of ownership, the Potomac Mills went out of business after nearly 75 years of operation. By 1904, the property was again for sale, reported the *Shepherdstown Register*, noting that cement from the Potomac Mills was used to build the "Boundary Sewer in Washington" as well as the District's "Army and Navy buildings."⁹⁰

In 1916, the West Virginia Geologic Survey reported that the Potomac Mills (called by them the "Potomac Cement Company" or "Shepherdstown Cement Company") buildings had not been in use since 1900 and that they were still in good condition.⁹¹ In 1924, a devastating flood closed the C&O Canal for good and likely damaged the by then long-vacant mill buildings beyond repair. The 1936 Potomac River flood was "the heaviest flood in the recorded history of the Potomac Valley."⁹² That year Harry W. Blunt, Jr. conveyed the "Potomac Cement Mill Property," with "buildings, mills, machinery, water rights, fixtures," to Harry W. Blunt (III).⁹³ The property, now approximately 18 acres, remained in the Blunt family ownership until the 2011 purchase by the Jefferson County Landmarks Commission.⁹⁴

⁸⁸ Hahn and Kemp, p. 62, citing *Shepherdstown Register*, June 7, 1889.

⁸⁹ George Perry Grimsley, *County Reports and Maps, Jefferson, Berkeley, and Morgan Counties*, (Wheeling: West Virginia Geological Survey, 1916), p. 494.

⁹⁰ Hahn and Kemp, p. 67.

⁹¹ Grimsley, p. 494.

⁹² Unrau, p. 318.

⁹³ JC DB 158, p. 18.

⁹⁴ JC DB 1102, p. 362, Harry W. Blunt IV to Jefferson Co. Landmarks Commission

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Potomac Mills
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10. Geographical Data

Acreage of Property Approx. 19 acres

UTM References

(Place additional UTM references on a continuation sheet)

1	1	8	2	6	0	5	6	0	4	3	6	8	1	0	0
	Zone		Easting			Northing									

3	1	8	2	6	0	8	2	0	4	3	6	7	5	8	0
	Zone		Easting			Northing									

2	1	8	2	6	0	9	6	0	4	3	6	8	0	2	0
	Zone		Easting			Northing									

4	1	8	2	6	0	3	4	0	4	3	6	7	8	4	0
	Zone		Easting			Northing									

☐ See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet)

11. Form Prepared By

name/title Paula S. Reed, Ph.D., Architectural Historian; Edie Wallace, M.A., Historian

Organization Paula S. Reed & Associates, Inc.

date 12/27/12; rev. 8/21/13

street & number 1 W. Franklin St., Suite 201

telephone 301-739-2070

city or town Hagerstown

state Maryland

zip code 21740

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional Items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO)

Name Jefferson County Landmarks Commission (18 acre parcel)

State of Maryland (river resources)

street & number PO BOX 23

telephone

city or town Charles Town

state WV

zip code 25414

Paperwork Reduction Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et. seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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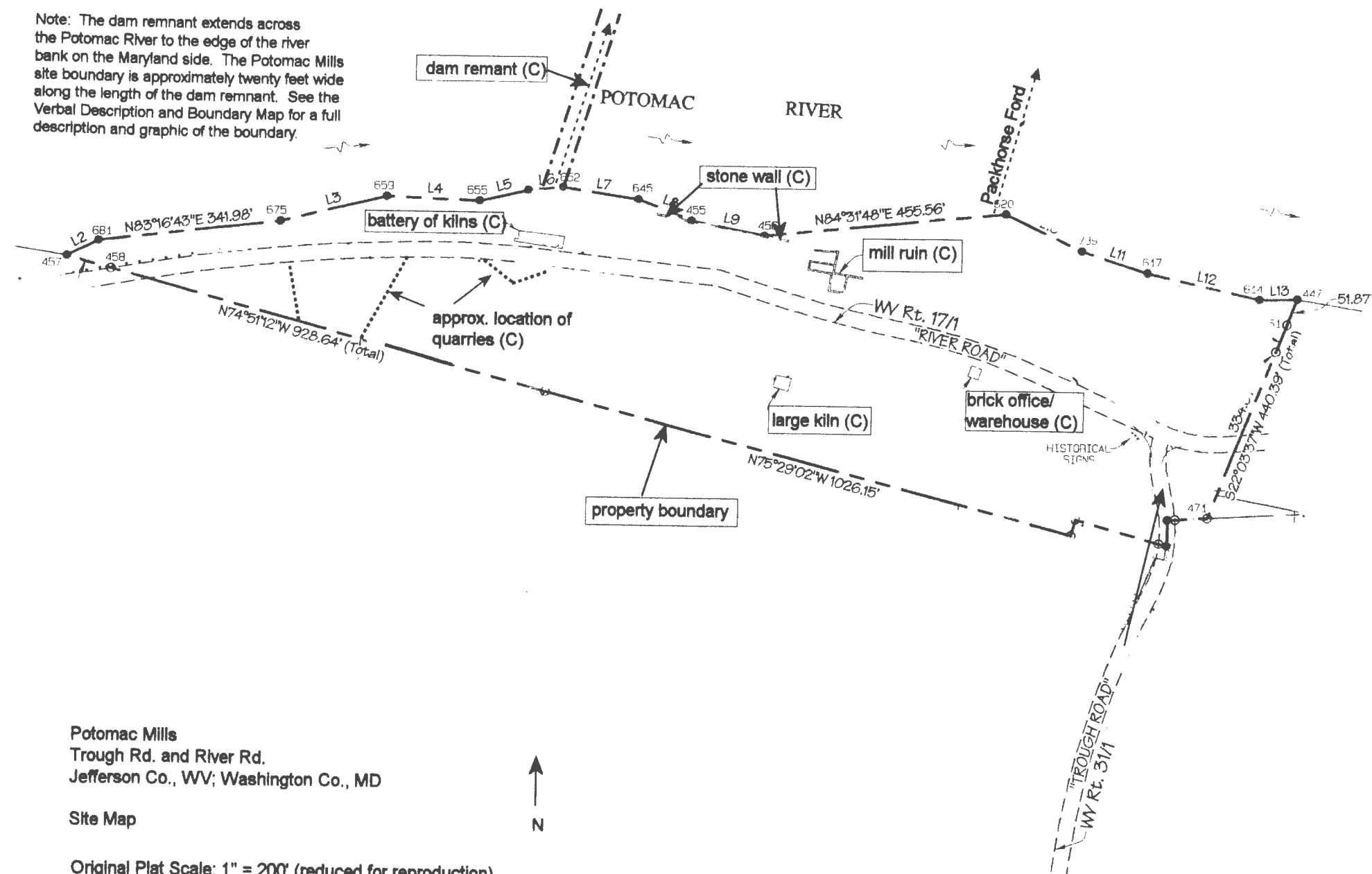
Verbal Boundary Description:

The boundary inclusive of the Potomac Mills complex follows the legal boundary description of the 18-acre Potomac Mills property (reference Jefferson Co. Deed Book 1102, p. 362; see attached plat), the River Road and Trough Road rights-of-way within that property, all located in Jefferson County, West Virginia. Also one linear feature, the dam remnant, which is located within the Potomac River in Maryland stretching from the Maryland north bank to the West Virginia south bank of the river. The dam boundary begins at a point on the south bank of the river at the western end of the head race Stone Wall and extends approximately 20 feet wide running northerly across the width of the Potomac River, approximately 700 feet to respective points on the Maryland (north) side of the river.

Boundary Justification:

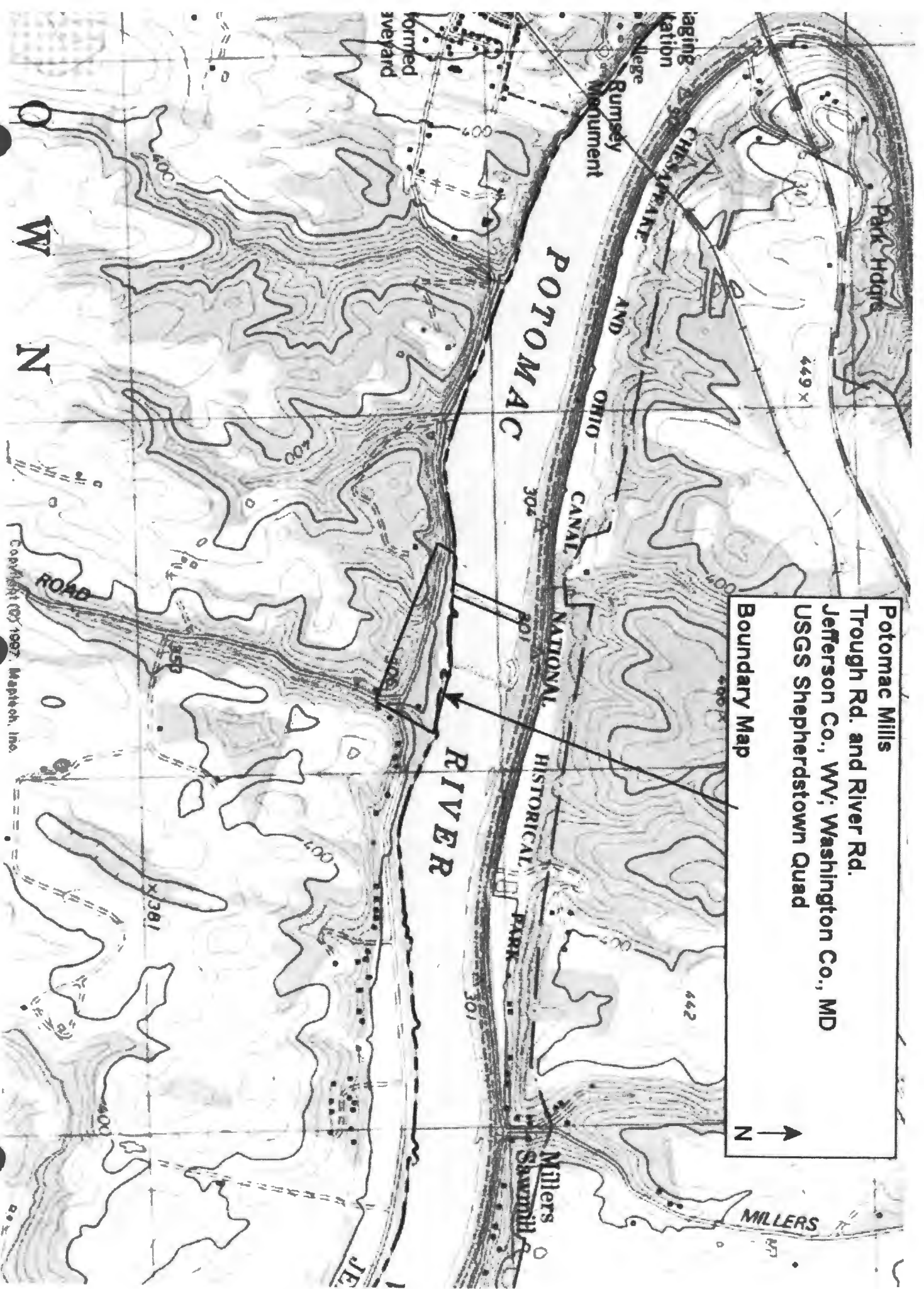
The described boundary of the Potomac Mills property is the historic mill lot (13 acres) as it was conveyed in 1846 (JC DB 28, p. 241), 1866 (JC DB 1, p. 412), 1878 (JC DB F, p. 498), and in 1936 (JC DB 158, p. 18). The 5-acre additional acreage is likely due to modern survey techniques and possibly low water in the river – the difference is not specifically addressed in the most recent survey (Appalachian Surveys, PLLC, 2012). A 2002 survey by Gates Associated, Inc. (Plat #10030) notes: “The boundary along the Potomac River is intended to be along the meanders of the low water mark as delineated in the referenced court decision [1910 case recorded in 30 Sup. Ct. Rep. 630]. The bearings and distances shown represent chords and distances along the existing located meander at the time of the survey.” The nominated boundary includes also the dam remnant, described verbally as approximately 20 feet wide to be inclusive of all underwater remains. The dam is included because it is an integral feature of the mill property history.

Note: The dam remnant extends across the Potomac River to the edge of the river bank on the Maryland side. The Potomac Mills site boundary is approximately twenty feet wide along the length of the dam remnant. See the Verbal Description and Boundary Map for a full description and graphic of the boundary.



Potomac Mills
Trough Rd. and River Rd.
Jefferson Co., WV; Washington Co., MD
USGS Shepherdstown Quad

Boundary Map



NR Digital Photograph Log (3 pages)

Name of Property: Potomac Mills
City or Vicinity: Shepherdstown
County, State: Jefferson County, WV; Washington County, MD
Name of Photographer: Edie Wallace
Date of Photographs: February 2012
Location of Original Files: WV and MD SHPO
Number of Photographs: 29

HP 100 Gray Photo Cartridge
HP Premium Plus Photo Paper

MD_Washington County_Potomac Mills_0001
Potomac Mills Dam, view N from West Virginia shore.

MD_Washington County_Potomac Mills_0002
Setting, Packhorse Ford, view SW from Maryland shore.

WV_Jefferson County_Potomac Mills_0003
Setting, view SW from Maryland of Potomac Mills site.

WV_Jefferson County_Potomac Mills_0004
Trough Road, view S.

WV_Jefferson County_Potomac Mills_0005
River Road, view W.

WV_Jefferson County_Potomac Mills_0006
Limestone quarry, south side of River Road opposite Battery of Kilns, view SE.

WV_Jefferson County_Potomac Mills_0007
Limestone quarry and bluffs above, SW of Battery of Kilns, view S from River Road.

WV_Jefferson County_Potomac Mills_0008
Potomac Mills ruin, view SE showing N elevation of middle and east sections.

WV_Jefferson County_Potomac Mills_0009
Potomac Mills ruin, view W showing N elevation of middle section (left) and E elevation of west section (center).

WV_Jefferson County_Potomac Mills_0010
Potomac Mills ruin, view NW toward Potomac River showing E elevation of west section at NE corner.

WV_Jefferson County_Potomac Mills_0011

Potomac Mills ruin, interior, middle section, west wall, view NW.

WV_Jefferson County_Potomac Mills_0012

Potomac Mills ruin, interior, middle section, north wall, view NW.

WV_Jefferson County_Potomac Mills_0013

Potomac Mills ruin, interior, arch in wall between west and middle sections, view SW.

WV_Jefferson County_Potomac Mills_0014

Potomac Mills ruin, interior, west section, view NW.

WV_Jefferson County_Potomac Mills_0015

Potomac Mills ruin, interior, west section, middle cell, view NE.

WV_Jefferson County_Potomac Mills_0016

Stone Wall Remnant leading from the dam to the Potomac Mills, view E.

WV_Jefferson County_Potomac Mills_0017

Brick "Office Bldg" Warehouse/Dwelling, W and N elevations, view SW from River Road.

WV_Jefferson County_Potomac Mills_0018

Brick "Office Bldg" Warehouse/Dwelling, detail of E elevation showing upper story addition and infilled vents.

WV_Jefferson County_Potomac Mills_0019

Brick "Office Bldg" Warehouse/Dwelling, interior detail of brick vents in east wall.

WV_Jefferson County_Potomac Mills_0020

Brick "Office Bldg" Warehouse/Dwelling, interior detail of "Boteler & Reynolds 1829" inscription on west wall flue.

WV_Jefferson County_Potomac Mills_0021

Experimental Kiln, west end of Battery of Kilns, view S.

WV_Jefferson County_Potomac Mills_0022

Battery of Kilns, north elevation, view W.

WV_Jefferson County_Potomac Mills_0023

Battery of Kilns, north elevation, west end, detail of drawpit arch keystone.

WV_Jefferson County_Potomac Mills_0024

Battery of Kilns, north elevation, east end drawpit.

WV_Jefferson County_Potomac Mills_0025

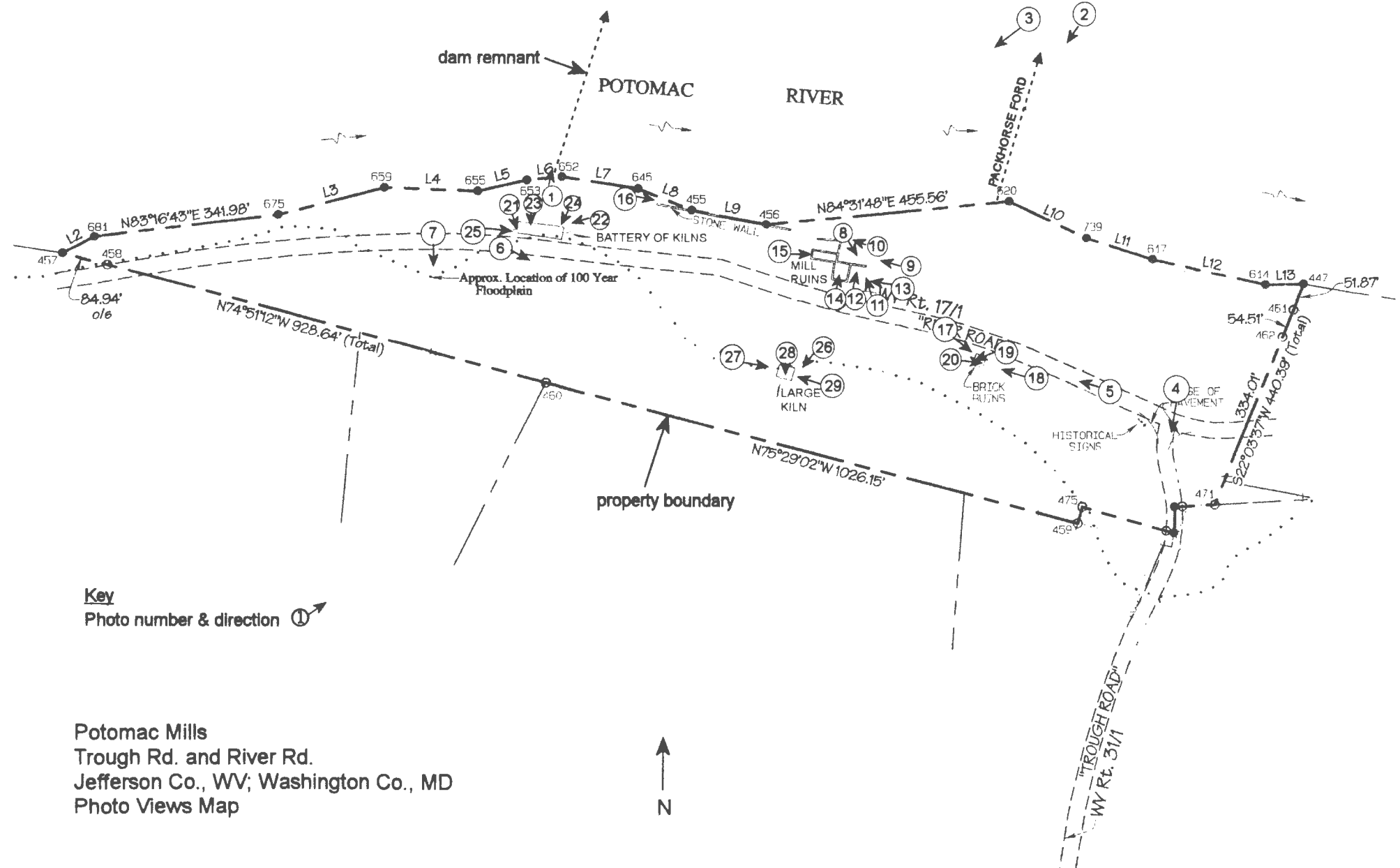
Battery of Kilns, top view from River Road, view NE.

WV_Jefferson County_Potomac Mills_0026
Large Kiln, east and north elevations, view SW.

WV_Jefferson County_Potomac Mills_0027
Large Kiln, view E showing top of kiln.

WV_Jefferson County_Potomac Mills_0028
Large Kiln, detail of kiln throat.

WV_Jefferson County_Potomac Mills_0029
Large Kiln, detail of drawpit.



Potomac Mills
River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

Figure 1: IHTIA plan drawing of Potomac Mills ruin (Hahn & Kemp 1994, p. 45)

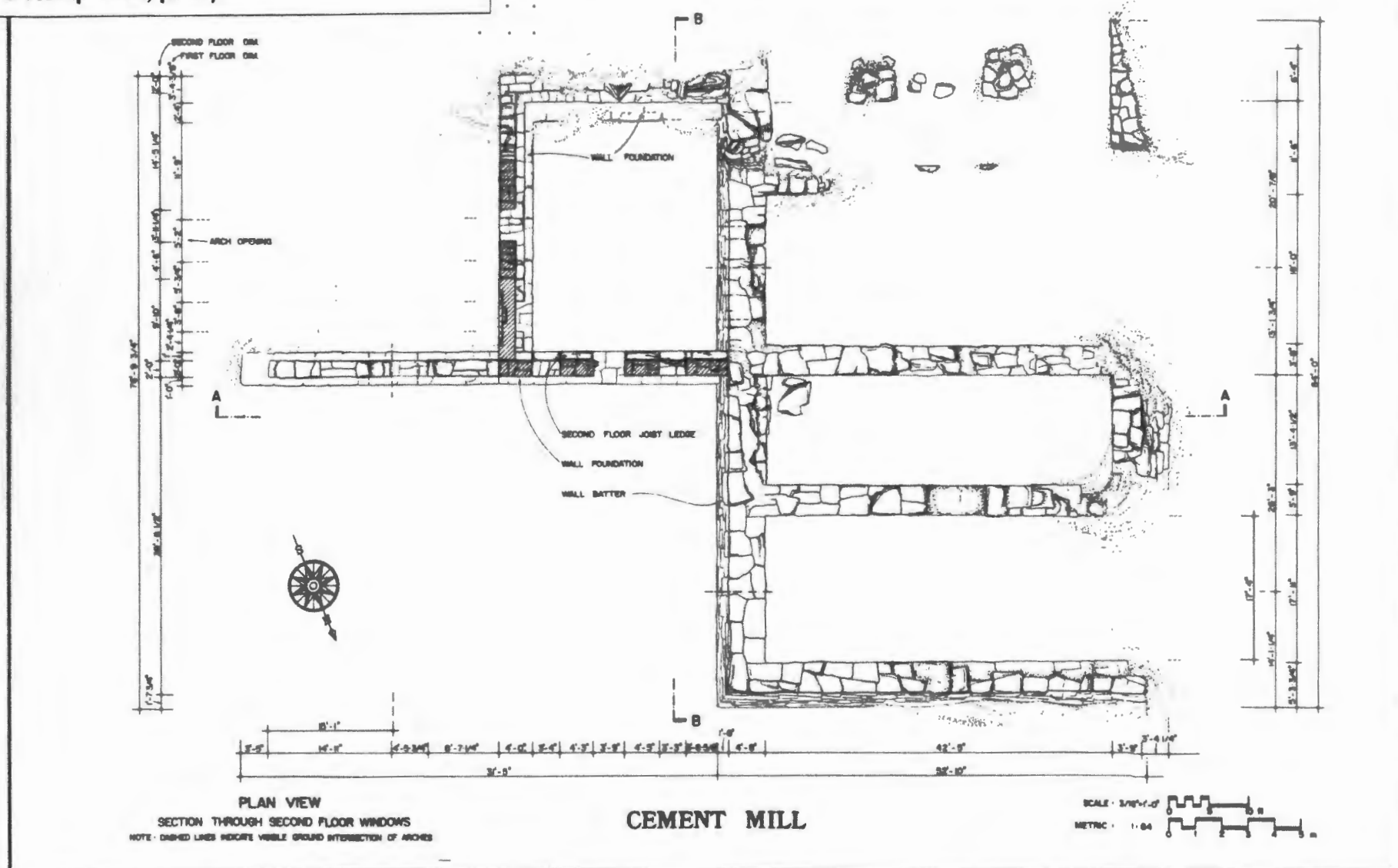


Figure 43. This drawing shows the plan of the Shepherdstown Cement Mill at the level of the second floor works. The plan also shows when the sections were taken for the vertical section drawings. Apart from details of the walls of the various parts of the mill the drawing is intended to provide an orientation for the photographer of the mill. (IHTIA)

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Potomac Mills
River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

Figure 2: 'Botelers Mill ca. 1890"
(Washington Co. Free Library, Western MD Room)



Botelers Mill ca. 1890

Potomac Mills
River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

Figure 3: Abandoned Potomac Mills, 1907
(West Virginia & Regional History Collection, WVU)



REINHART'S
PHARMACY

West Virginia & Regional History Collection

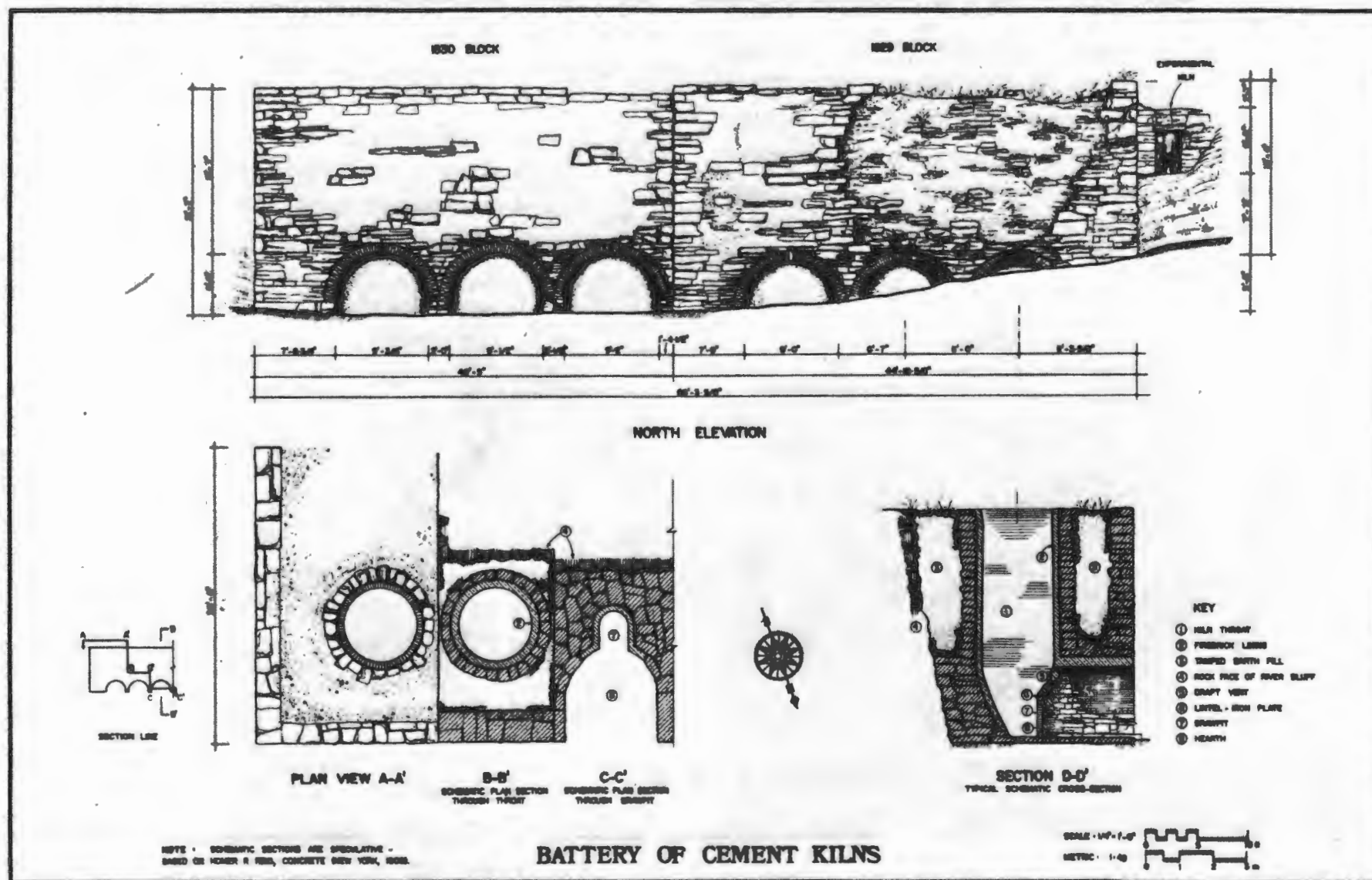
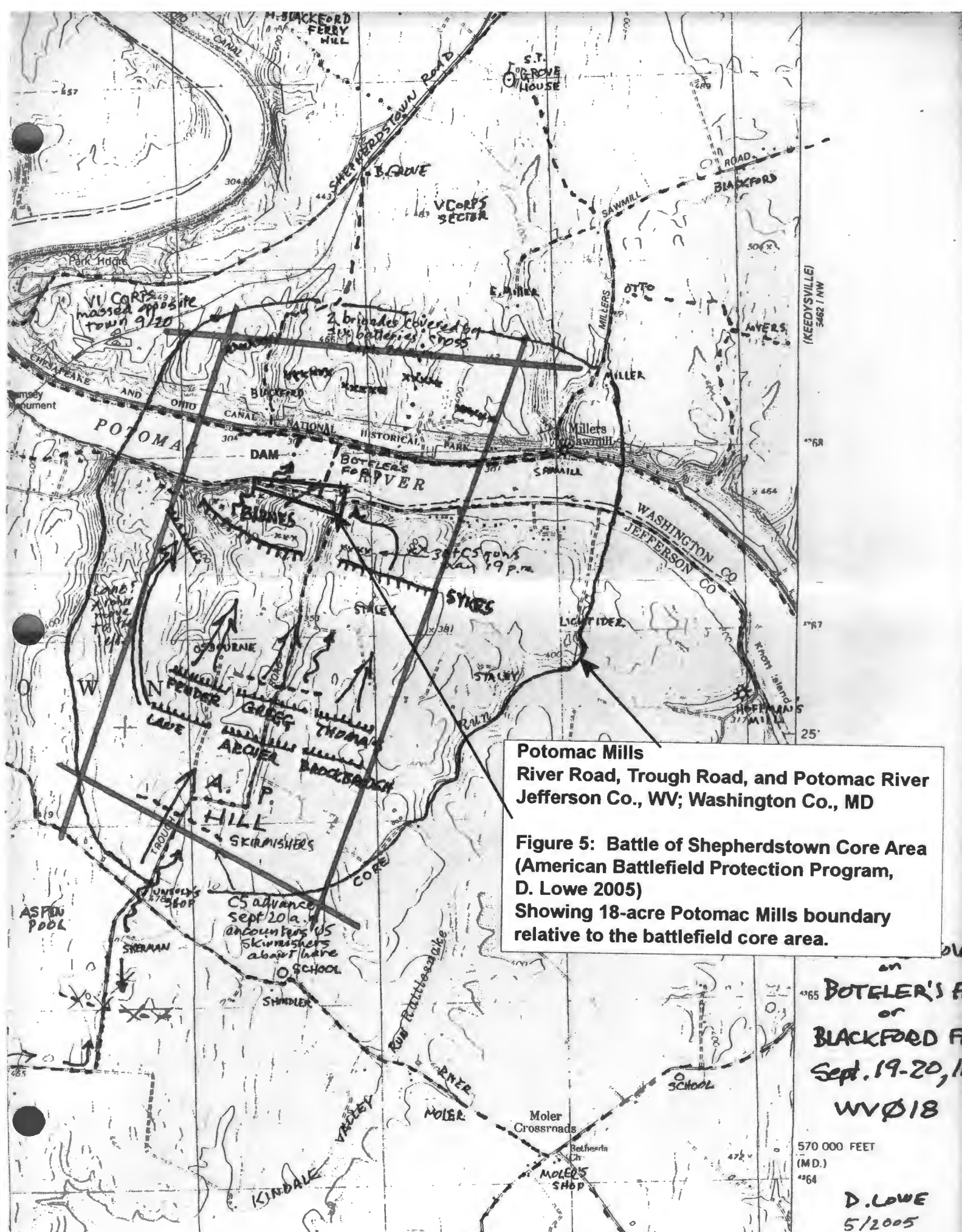


Figure 31. The battery of cement kilns is depicted in elevation, plan/section and a section through a typical kiln, including an elevation of the small experimental kiln. (IHTIA)

Potomac Mills
River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

Figure 4: Battery of Cement Kilns (Hahn & Kemp 1994, p. 39)



Potomac Mills
 River Road, Trough Road, and Potomac River
 Jefferson Co., WV; Washington Co., MD

Figure 5: Battle of Shepherdstown Core Area
 (American Battlefield Protection Program,
 D. Lowe 2005)
 Showing 18-acre Potomac Mills boundary
 relative to the battlefield core area.

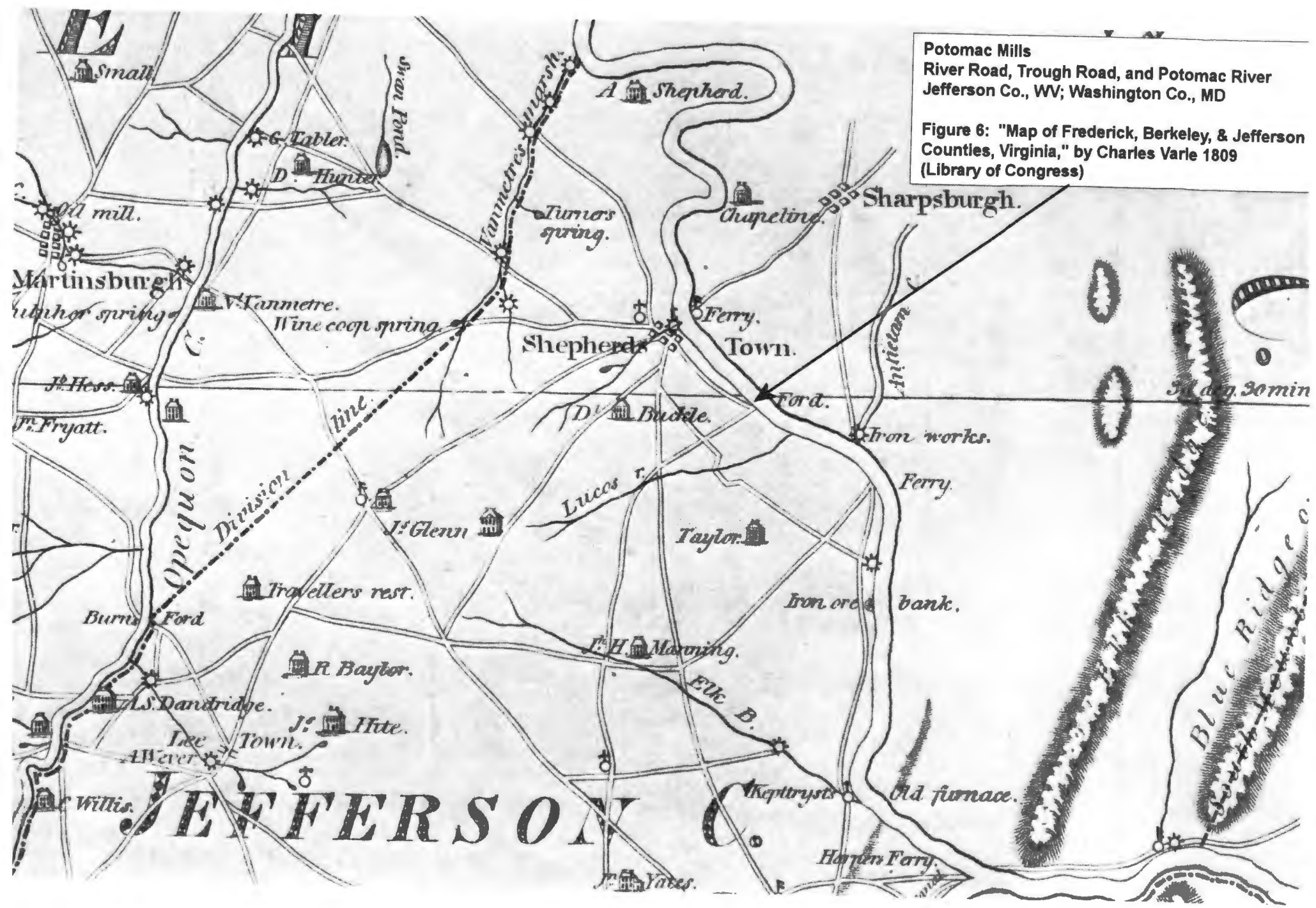
**BOTTLER'S FERRY
 or
 BLACKFORD FERRY
 Sept. 19-20, 1862
 WV 18**

570 000 FEET
 (MD.)
 4364

**D. LOWE
 5/2005**

Potomac Mills
River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

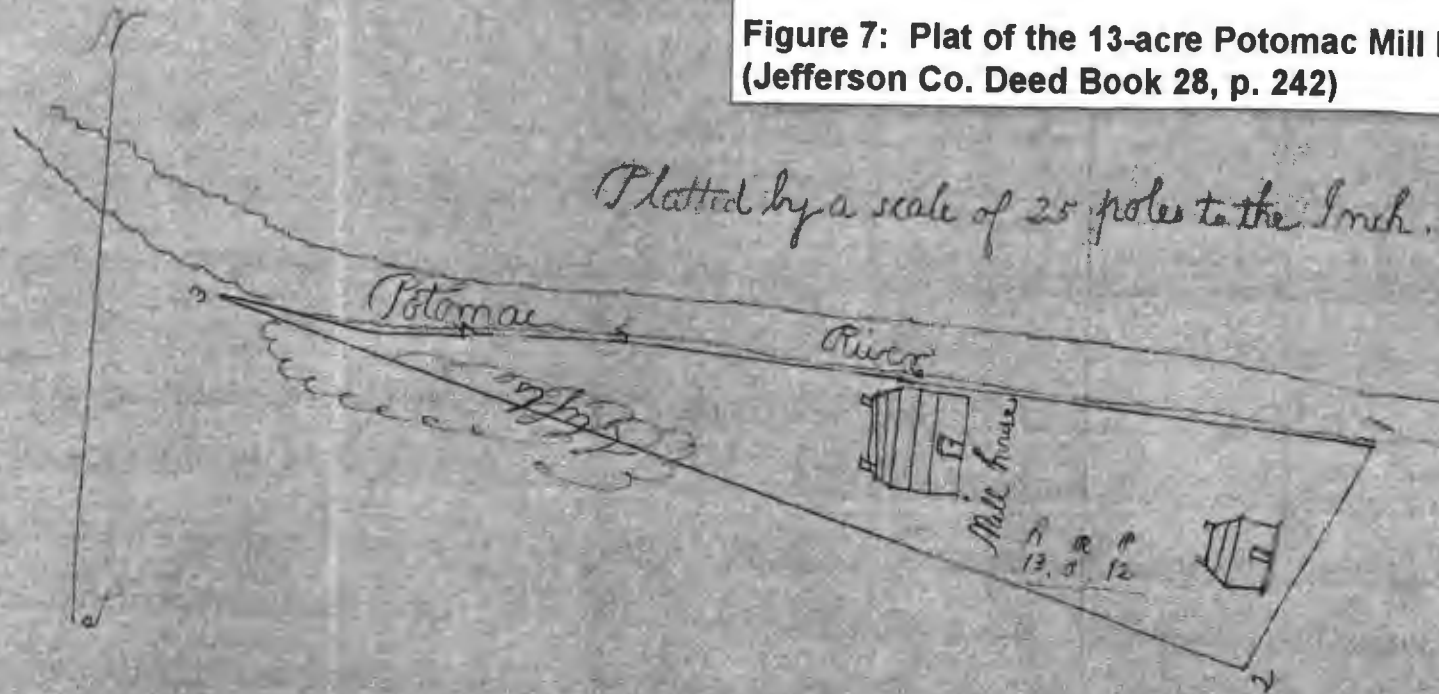
Figure 6: "Map of Frederick, Berkeley, & Jefferson Counties, Virginia," by Charles Varle 1809
(Library of Congress)



and a bond payable on demand" having been inserted before signing.

Potomac Mills
River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

Figure 7: Plat of the 13-acre Potomac Mill lot, 1846
(Jefferson Co. Deed Book 28, p. 242)



The following are the boundaries of the above plat, situated on the Potomac River and known as Potomac Mill lot; Beginning at a Maple tree at the water edge of the Potomac River, on N.W. edge of a deep hollow, thence S $25\frac{1}{2}^{\circ}$ W $29\frac{3}{10}$ poles to a stake on the east side of the N 73° W 131 poles to the water edge of the said river, thence down the same at the water's edge its meanders S $80\frac{1}{2}^{\circ}$ E 18 poles, thence N $86\frac{1}{2}^{\circ}$ E 30 poles, thence S $85\frac{1}{4}^{\circ}$ E 34 poles thence S $81\frac{1}{4}^{\circ}$ poles to the beginning, containing 13 acres 0 rods and 12 poles. June 18th 1846.

Joseph M. Murr

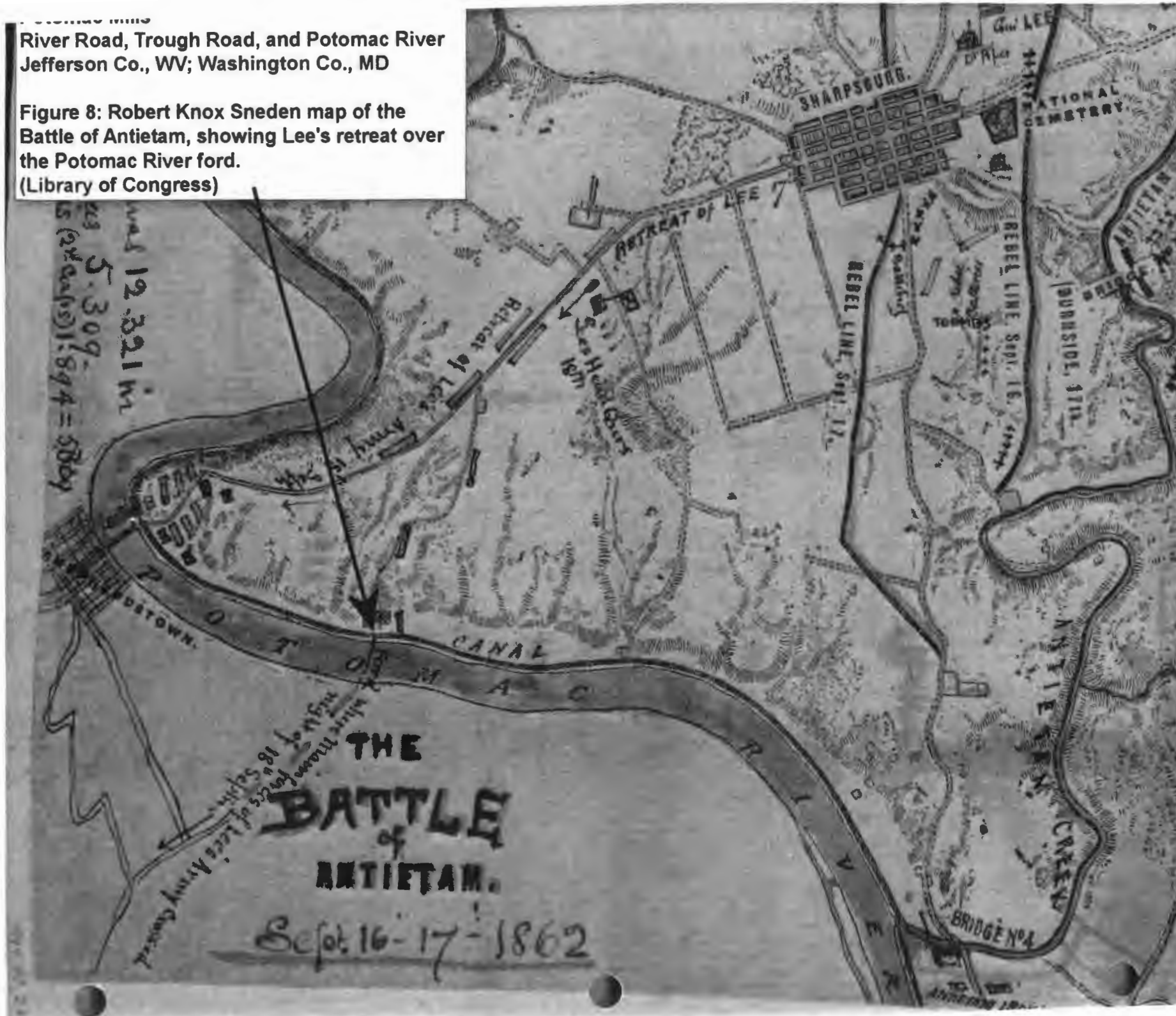
Jefferson County, Lot;

clerk's office of the County Court.

River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

Figure 8: Robert Knox Sneden map of the
Battle of Antietam, showing Lee's retreat over
the Potomac River ford.

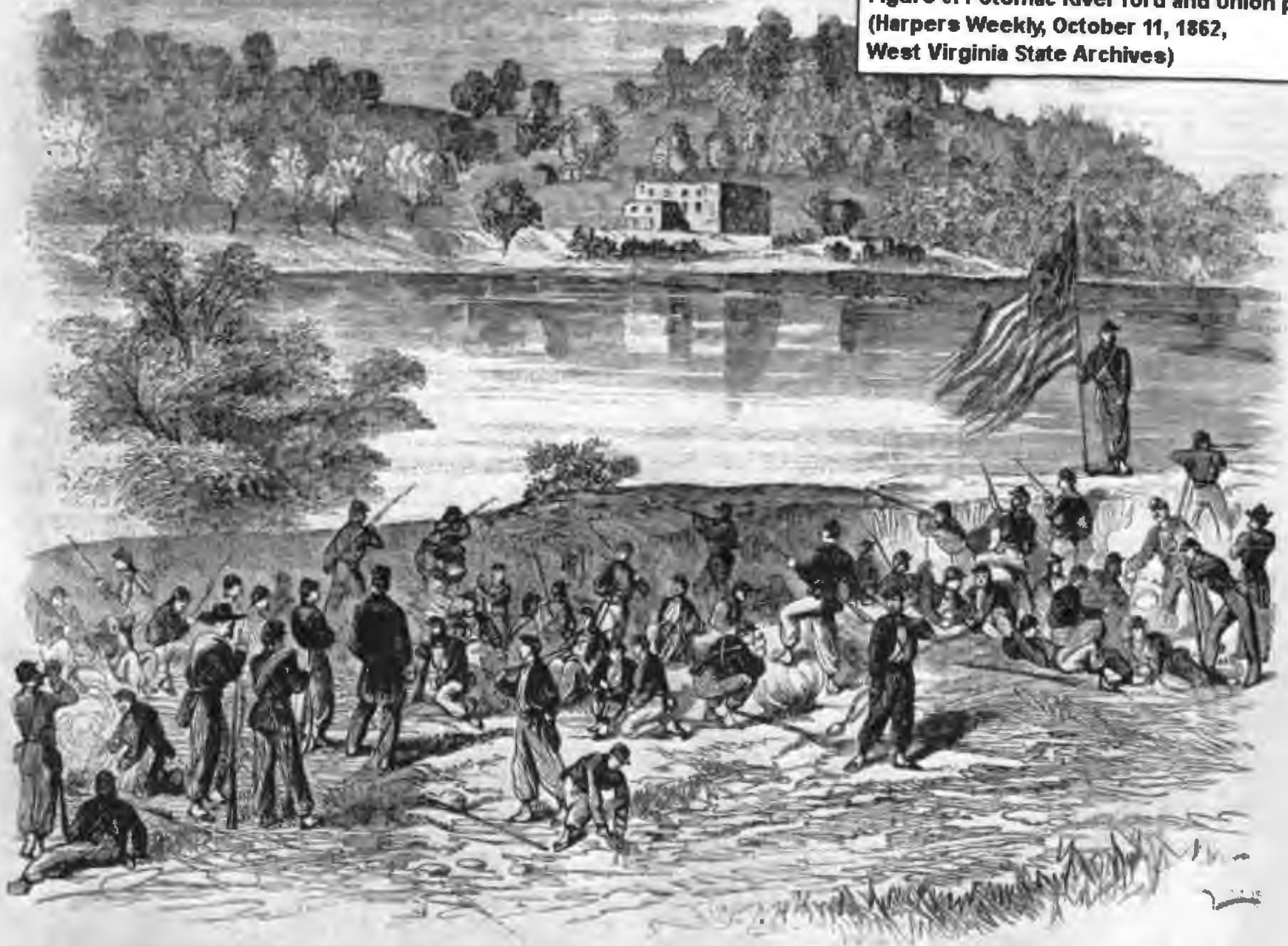
(Library of Congress)



West Virginia State Archives

Potomac Mills
River Road, Trough Road, and Potomac River
Jefferson Co., WV; Washington Co., MD

Figure 9: Potomac River ford and Union pickets
(Harpers Weekly, October 11, 1862,
West Virginia State Archives)



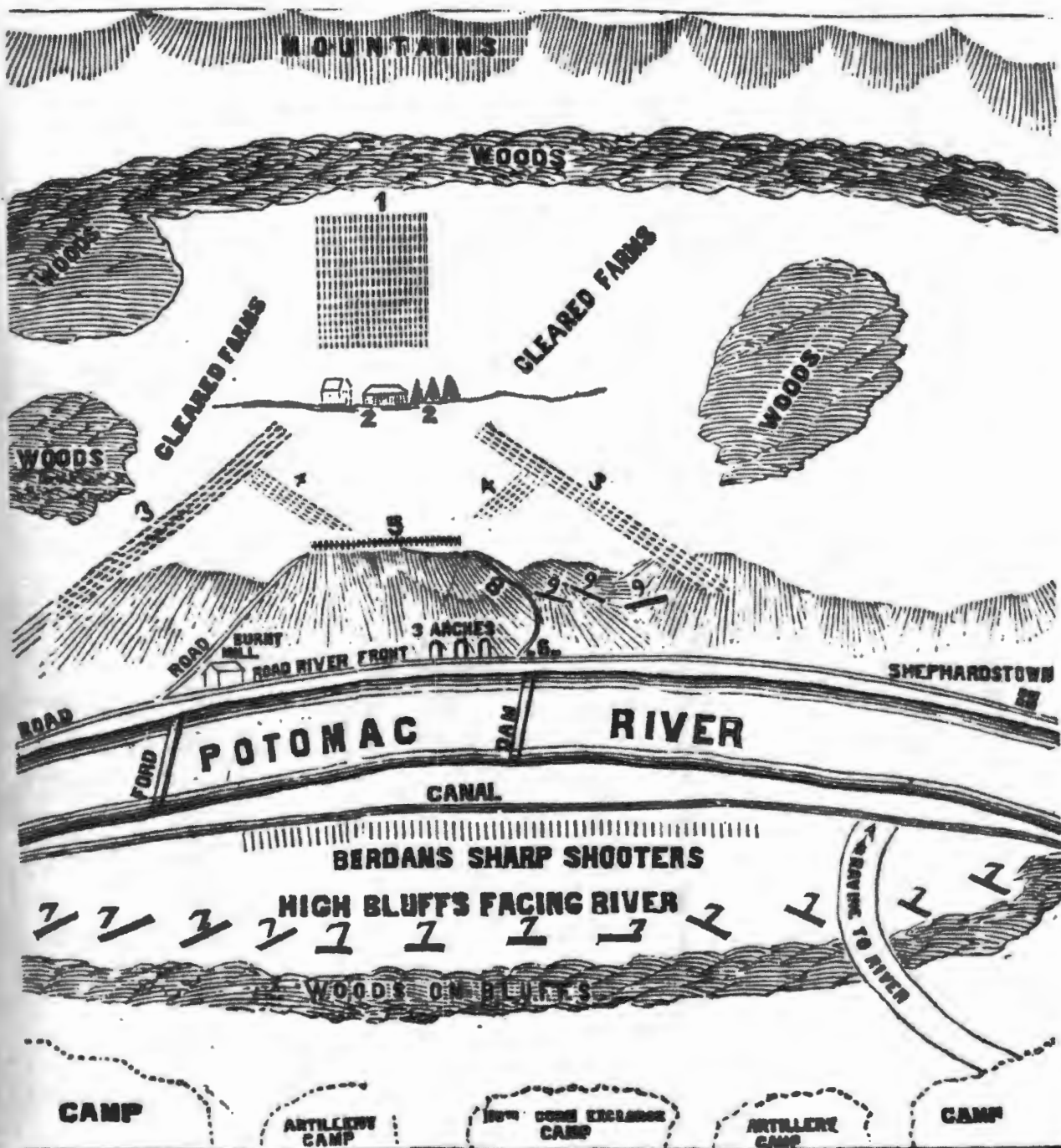
FORD NEAR SHEPHERDSTOWN, ON THE POTOMAC—PICKET FIRING ACROSS THE RIVER.—SKETCHED BY MR. A. E. WARD.—[See Page 614.]

Potomac Mills

River Road, Trough Road, and Potomac River; Jefferson Co., WV; Washington Co., MD

Figure 10: Map of the battle around the Potomac Mills (from McGrath, p. 145)

SCENE OF THE ATTACK OF THE CORN EXCHANGE REG'T.

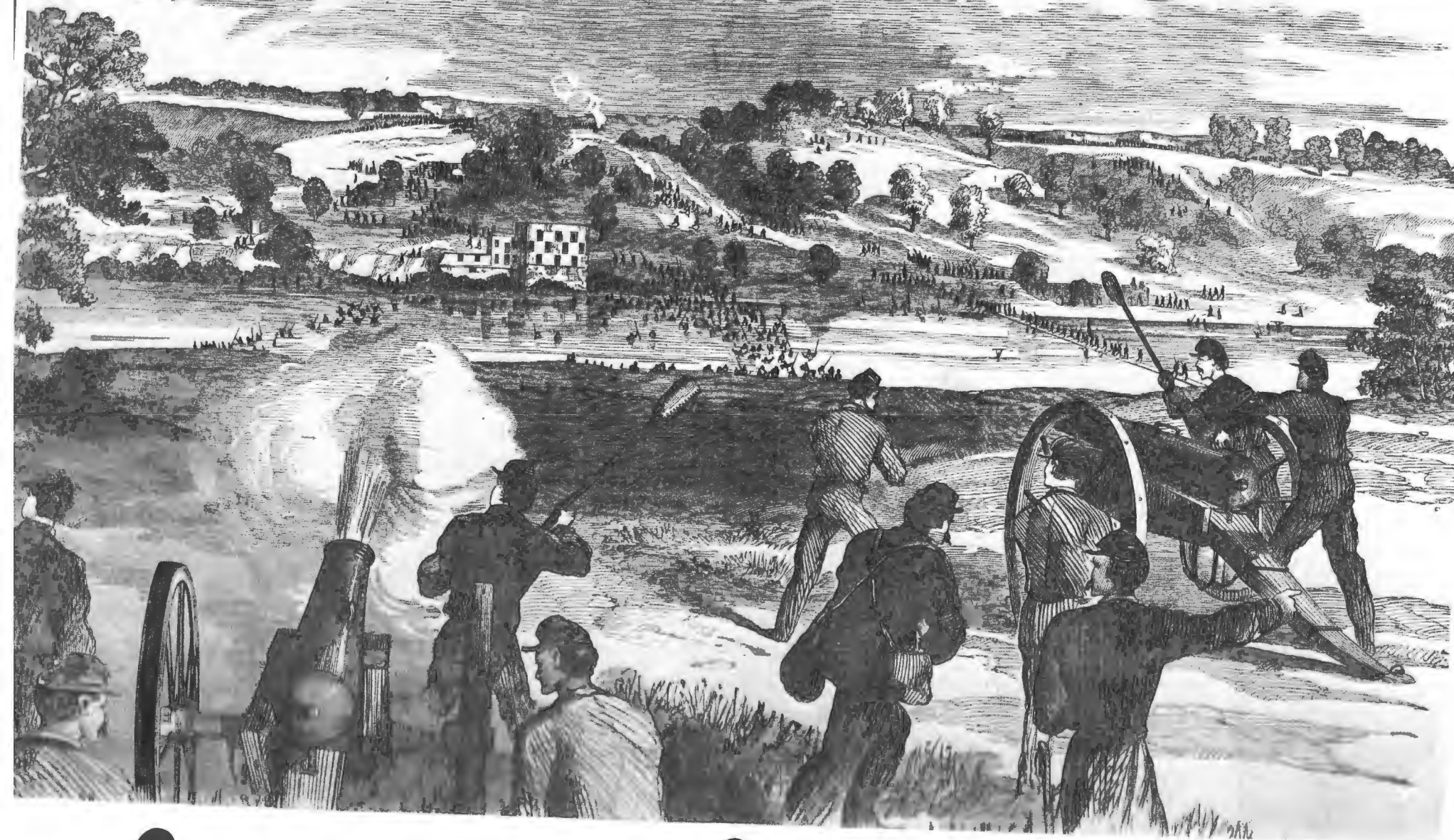


1. Solid column of Rebels advancing from wood on double quick.
2. Farm house and barn with hay stacks half mile back.
3. Columns of Rebels advancing in triangle.
4. Rebels advance with white flag.
5. 110th, Corn Exchange, in battle line.

6. Col. Barnes' position.
7. Batteries in position in ploughed fields commanding opposite heights covering retreat.
8. Path which the 110th, Corn Exchange, ascended.
9. The New York 13th and 25th, and 13th Michigan in battle line.

This sketch appeared in the *Philadelphia Inquirer* just days after the battle. Although some of Confederate formations are inaccurate and the 13th Michigan was not present, it is good overall depiction of the terrain and positions during the battle.

Figure 11: Frank Leslie engraving of the Battle of the Cement Mill, September 20, 1862
erroneously entitled "Battle at Dam No. 4, Potomac River..."
Print published in 1895 by Frank Leslie's widow.
(private collection)





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Potomac Mills + Packhorse Ford/Great Waggon Rd
Jefferson Co WV; Washington Co MD

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Potomac Mills Dam, view N from West Virginia shore.

Feb 2012

Packhorse Ford

It was after the Battle of Antietam, Confederate General Robert E. Lee retreated to the safety of the West Virginia (then Virginia) hills across the river from here. This was the only good crossing up the river for many miles upstream or downstream. Some of Lee's soldiers' graves are downed here on the bluffs. Preserved by war, mostly in place on the bluffs. From 1861 soldiers from the 110th Pennsylvania Infantry, the Confederation moved by crossing the river. This was the Pennsylvania 110th from here.

of battle, they were discovered that they were not. Instead, they were taken and captured. Instead, to the bluffs, they were left to their death. While soldiers were killed or wounded during the war, they were taken to the river.

Only 433 Pennsylvania soldiers returned to the safety and care of Maryland soil. Some were taken to the river, and some were taken to the river.

Historical Park Service
U.S. Department of the Interior

Historical Park Service
U.S. Department of the Interior

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Potomac Mills + Packhorse Ford / Great Waggon Rd.

Jefferson Co WV; Washington Co. MD

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Packhorse Ford, view SW from Maryland shore.

Feb. 2012



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Potomac Mills + Packhorse Ford / Great Wagon Rd.
Jefferson Co, WV; Washington Co., MD

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Setting, view SW from Maryland of Potomac Mills Site
Feb. 2012



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Potomac Mills + Packhorse Ford / Great Waggon Road
Jefferson Co WV; Washington Co MD
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Trough Road, view S.
Feb 2012



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Potomac Mills + Packhorse Ford / Great Waggon Rd
Jefferson Co. WV; Washington Co MD

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River Road, view W.

August 2012



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Potomac Mills + Packhorse Ford / Great Wagon Rd.
Jefferson Co WV; Washington Co MD

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Limestone quarry, S/S of River Rd opposite the
Battery of Kilns, view SE.

Feb 2012



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Potomac Mills + Packhorse Ford / Great Waggon Rd.
Jefferson Co. WV; Washington Co MD

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Limestone quarry and bluffs above, SW of Battery
of Kilns, view S from River Rd.

Feb 2012



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Potomac Mills & Packhorse Ford / Great Waggon Rd
Jefferson Co WV; Washington Co MD

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Potomac Mills ruin, view SE showing N elevation
of middle and east sections.

Feb 2012



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Potomac Mills + Packhorse Ford / Great Waggon Rd
Jefferson Co WV; Washington Co MD

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Potomac Mills ruin, view W showing N elevation of
middle section (left) and E elevation of West section
(center)

Feb 2012



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Potomac Mills + Packhorse Ford/Great Waggon Rd
Jefferson Co. WV; Washington Co. MD

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Potomac Mills ruin, view NW toward Potomac River
showing E elevation of west section at NE corner.

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Jefferson Co. WV ; Washington Co. MD

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Potomac Mills ruin, interior, middle section, west wall,
view NW.

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Jefferson Co WV; Washington Co MD

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Potomac Mills ruin, interior, middle section, north wall,
view NW.

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Jefferson Co WV; Washington Co MD

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Potomac Mills ruin, interior, arch between west and middle sections, view SW.

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Jefferson Co. WV; Washington Co MD

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Potomac Mills ruin, interior, west section, view NW.

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Jefferson Co. WV; Washington Co MD

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Potomac mills ruin, interior, west section, middle cell,
view NE.

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Potomac Mills + Packhorse Ford/Great Waggon Rd.
Jefferson Co WV; Washington Co MD

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Stone wall remnant leading from the dam to the
Potomac Mills, view E.

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Potomac Mills + Packhorse Ford / Great Waggon Rd
Jefferson Co WV; Washington Co MD

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Brick "Office Bldg" Warehouse/Dwelling ruin,
W and N elevations, view SW from River Road

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Potomac Mills + Packhorse Ford / Great Waggon Rd.
Jefferson Co WV; Washington Co MD

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Brick "Office Bldg" Warehouse/Dwelling ruin, detail of
E elevation showing upper story addition and
infilled vents.

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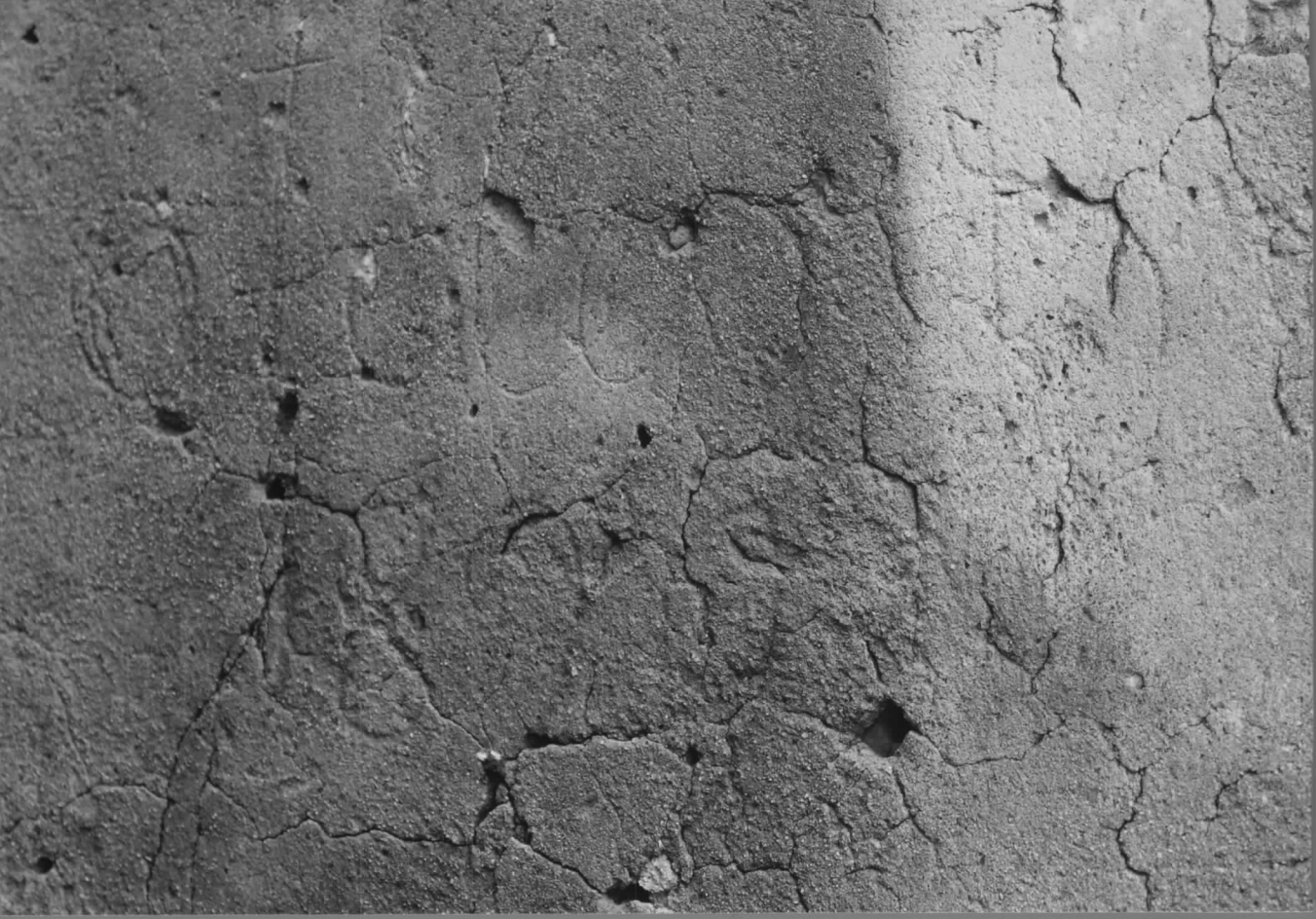
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Potomac Mills + Packhorse Ford / Great Waggon Rd
Jefferson Co WV; Washington Co MD

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Brick "Office Bldg" Warehouse/Dwelling ruin, interior
detail of brick vents in east wall.

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Potomac Mills + Packhorse Ford / Great Waggon Rd
Jefferson Co WV; Washington Co MD

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Brick "Office Bldg" Warehouse / Dwelling ruin, interior
detail of "Boteler + Reynolds 1829" inscription on
west wall flue.

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Jefferson Co. WV; Washington Co MD

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Experimental Kiln, west end of Battery of Kilns, view S.

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Potomac Mills + Packhorse Ford / Great Waggon Rd.
Jefferson Co. WV; Washington Co. MD

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Battery of Kilns, north elevation, view W.

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Potomac Mills + Packhorse Ford/Great Waggon Rd.
Jefferson Co WV; Washington Co MD

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Battery of Kilns, north elevation, west end, detail of
drawpit arch keystone.

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Jefferson Co WV; Washington Co. MD

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Battery of Kilns, north elevation, east end drawpit.

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Potomac Mills + Packhorse Ford / Great Waggon Rd
Jefferson Co WV; Washington Co MD

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Battery of Kilns, top view from River Road, view NE.

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Potomac Mills + Packhorse Ford / Great Waggon Rd.
Jefferson Co WV; Washington Co MD

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Large Kiln, east and north elevations, view SW.

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Potomac Mills + Packhorse Ford / Great Waggon Rd.
Jefferson Co WV; Washington Co MD

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Large Kiln, view E showing top of kiln.

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Potomac Mills & Packhorse Ford / Great Waggon Rd.
Jefferson Co WV; Washington Co MD

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Large Kiln, detail of kiln throat.

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Potomac Mills + Packhorse Ford / Great Waggon Rd.
Jefferson Co WV; Washington Co MD

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Large Kiln, detail of drawpit.

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